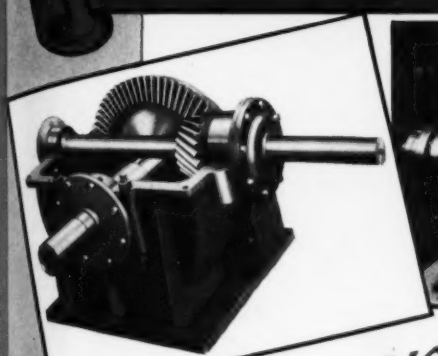
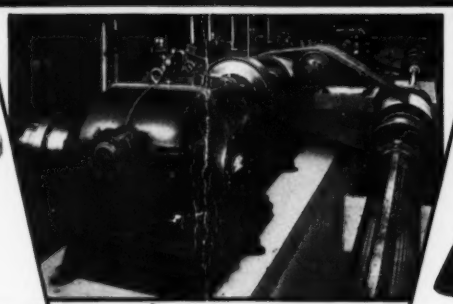
MAR 27 1944

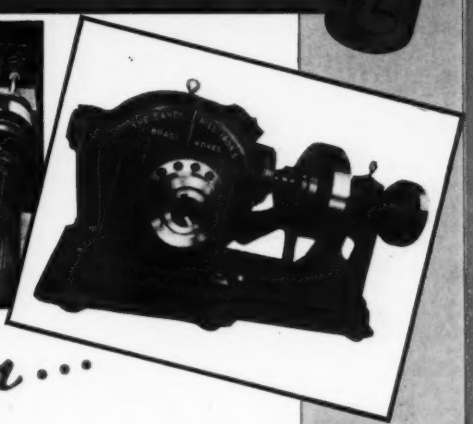
PAPER TRADE JOURNAL

MARCH 23, 1944

Sandy Hill
SELECTIVE DRIVES







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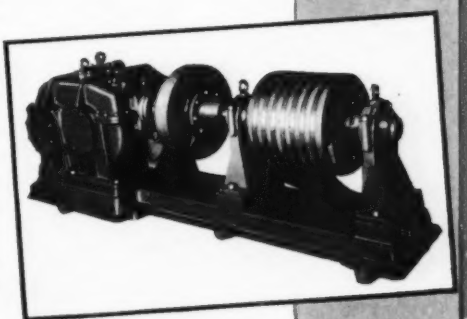

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Long distance flights of our warplanes often require every ounce of gasoline that can be carried. On these occasions, a temporary or "belly" gas tank is frequently carried underneath the plane, as shown in the photograph. The gas in the belly tank is used first and then the tank is released to drop where it may. . . . We don't know who made the vulcanized fibre used in these belly tanks, but we do know that with the aid of Downingtown Machinery, vulcanized fibre is made by our customers, the Continental-Diamond Fibre Co., Bridgeport, Pa., the National Vulcanized Fibre Co., Wilmington, Del., and Marshall Bros., Inc., Yorklyn, Del. . . . Performance of Downingtown Machinery under the stress of wartime conditions is something for every paper and board mill to remember, or investigate, before ordering post-war equipment. . . . Our Engineering Dept. is at your service, NOW. . . . Downingtown Mfg. Co., Downingtown, Pa.

D DOWNINGTOWN

Official Photograph, U. S. Army Air Forces

PAPER TRADE JOURNAL

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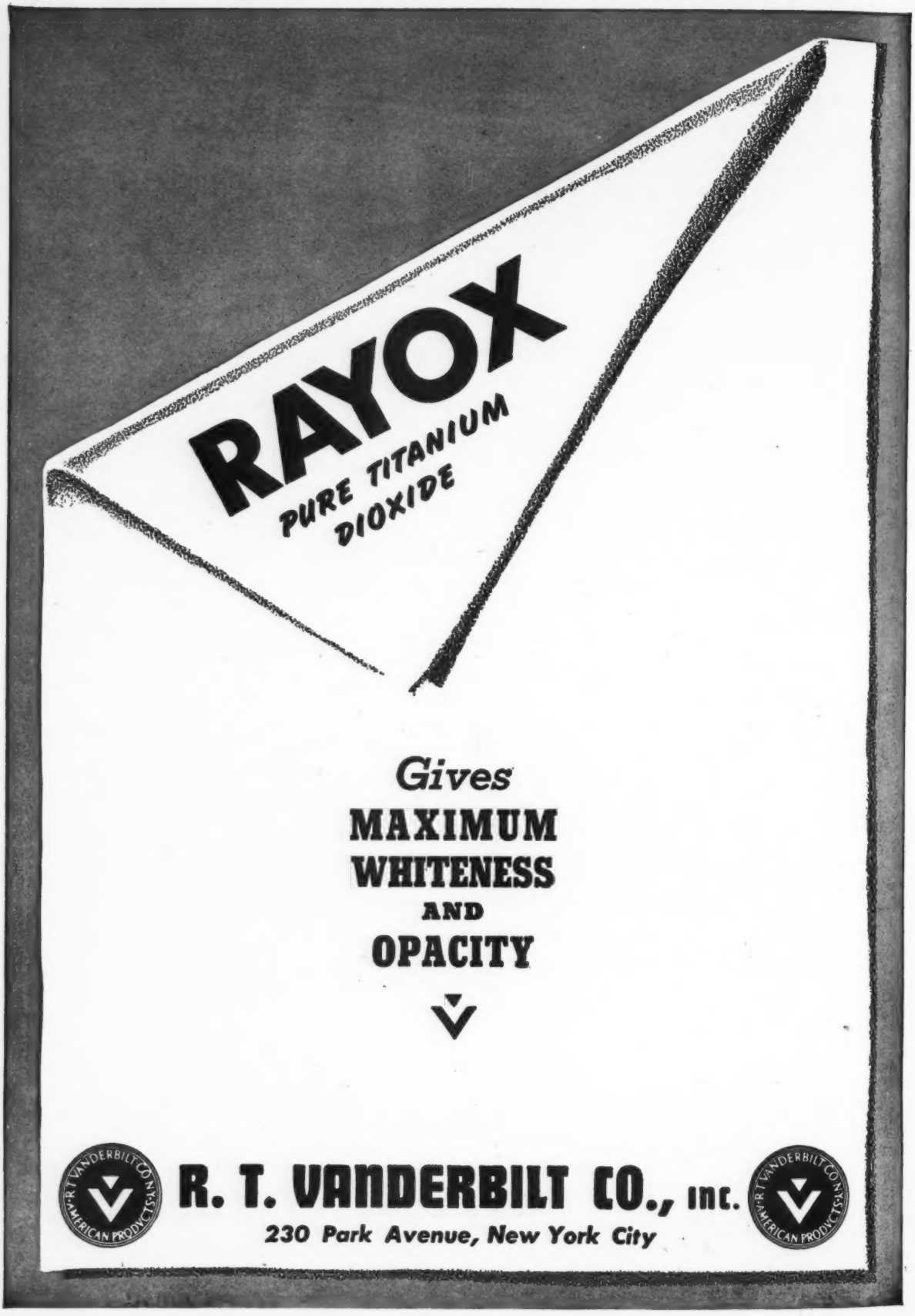
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PAPER
TRADE JOURNAL
Title Reg. U. S. Pat. Off.

Vol. 118, No. 12 Thursday, March 23, 1944 Price Ten Cents

Open Paper Bids for U. S. Printing Office

Joint Congressional Printing Committee Considers Proposals For 37,628,000 Pounds of Paper For Use of Government Printing Office For Period Beginning April 1 — To Make Awards March 27.

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., March 20, 1944—Bids were opened today by the Joint Congressional Committee on Printing for 37,628,000 pounds of paper for the use of the Government Printing Office for the three months beginning April 1. The Joint Committee will meet March 27 to consider awards. The bids were as follows:

Newsprint

No. 1—2,200,000 lbs., 24x36—64; rolls, 19, 24, 36 and 48 ins. wide (3-inch fiber cores, weight of cores and wrappers shall be included in net weight).
Marquette Paper Corp..... (OPA Ceiling Price)

Telephone Book News

No. 2—150,000 lbs., 24x36—45; rolls, 28, 38 and 48 ins. wide (3-inch fiber cores). (Weight of cores and wrappers shall be included in the net weight.)
Bermigham Prosser..... 5.38c

Machine-Finish Book

No. 3—250,000 lbs., 25x38—70; flat, cut 22½x31, 28½x48, 31¼x45½ and 32x42 ins.
Marquette Paper Corp..... 7.98c

No. 4—500,000 lbs., 25x38—70; flat, cut 24x38, 28x38, and 38x48 ins.
Walker Goulard Plehn Co..... (162,000 lbs. only) 7.70c
Barton, Duer & Koch Paper Co... (1,500,000 lbs. total lots 4 to 10 inc.) 7.95c

No. 5—500,000 lbs, 25x38—70; flat, cut 24x38, 28x38, and 38x48 ins.
Barton, Duer & Koch Paper Co.. (1,500,000 lbs. total lots 4 to 10 inc.) 7.95c

No.6—300,000 lbs., 25x38—70; rolls, 28½ ins. wide (3-inch fiber cores).
Mudge Paper Co..... 7.49c
Mead Sales Co..... 7.59c
Perkins-Goodwin Co..... (800,000 lbs. total lots 6, 7 and 8) 6.98c
Barton, Duer & Koch Paper Co... (1,500,000 lbs. total lots 4 to 10 inc.) 7.55c

No. 7—500,000 lbs., 25x38—70; rolls, 19 and 38 ins. wide (3-inch fiber cores).
Frank Parsons Paper Co..... 7.60c
Barton, Duer & Koch Paper Co... (1,500,000 lbs. total lots 4 to 10 inc.) 7.55c
Mudge Paper Co..... (200,000 lbs. only) 7.49c
Paper Corp. of U. S..... 7.24c
Perkins Goodwin Co..... (800,000 lbs. total lots 6, 7 and 8) 6.98c

No. 8—500,000 lbs., 25x38—70; rolls, 19 and 38 ins. wide (3-inch fiber cores).
Barton, Duer & Koch Paper Co... (1,500,000 lbs. total lots 4 to 10 inc.) 7.55c
Mudge Paper Co..... (200,000 lbs. only) 7.49c
Allied Paper Mills..... 7.30c
Paper Corp. of U. S..... 7.24c
Marquette Paper Corp..... 7.60c
Perkins Goodwin Co..... (800,000 lbs. total lots 6, 7 and 8) 7.25c

No. 9—400,000 lbs., 25x38—70; rolls, 24, 36, and 48 ins. wide (3-inch fiber cores).
Barton, Duer & Koch Paper Co... (1,500,000 lbs. total lots 4 to 10 inc.) 7.55c
Allied Paper Mills..... 7.30c

No. 10—150,000 lbs., 25x38—80; flat, cut any size, min. width 24 ins., max. width 48 ins.
Barton, Duer & Koch Paper Co... (1,500,000 lbs. total lots 4 to 10 inc.) 7.40c
Stanford Paper Co..... 7.45c

Machine-Finish Book End Paper

No. 18—40,000 lbs., for waste leaves; flat, cut 25x38—160; the grain to run the 38-inch way.
Willcox, Walter Furlong Paper Co. 7.58c

Offset Book

No. 19—2,250,000 lbs., 25x38—80; flat, cut 32x42, 34x44, 35x45, 36x56, and 38x48 ins., the grain to run lengthwise of the sheet.

No. 20—1,250,000 lbs., 25x38—100; flat, cut 32x42, 34x44, and 38x48 ins., the grain to run lengthwise of the sheet.
R. P. Andrews Paper Co..... (600,000 lbs. only) 8.62c
North American Pulp & Paper Co. (100,000 lbs. only) 7.80c
Paper Corp. of U. S..... (500,000 lbs. only) 8.69c
Central Ohio Paper Co..... (100,000 lbs. only) 8.52c
Aetna Paper Co..... (100,000 lbs. only) 8.68c
R. P. Andrews Paper Co..... (400,000 lbs. only) 7.56c
Aetna Paper Co..... (100,000 lbs. only) 7.56c

Offset Poster

No. 21—1,200,000 lbs., 25x38—120; flat, cut 28x38 ins., the grain to run lengthwise of the sheet.
Whitaker Paper Co..... (400,000 lbs. only) 7.42c

Antique Book

No. 22—80,000 lbs., 25x38—90; flat, cut 33x43 and 38x50 ins.
Stanford Paper Co..... 7.17c
Willcox, Walter Furlong Paper Co. 7.49c
Mead Sales Co..... 7.18c

Lightweight Machine Finish Book

No. 23—40,000 lbs., 25x38—60; flat, cut 28x38 and 38x48 ins.
Graham Paper Co..... 8.67c
No bids

50 Per Cent Antique Book

No. 26—50,000 lbs., 25x38—80; flat, cut 38x48 ins.
Whitaker Paper Co..... 14.44c
No bids
No bids

Supercalendered Book

No. 33—100,000 lbs., 25x38—90; flat, cut any size, min. width 24 ins., max. width 48 ins.

No. 34—800,000 lbs., 25x38—90; rolls, 28½ and 38 ins. wide (3-inch fiber cores).
Stanford Paper Co..... 7.71c
R. P. Andrews Paper Co..... 7.24c
Mudge Paper Co..... (400,000 lbs. only) 7.35c

Machine-Coated Book

No. 37—500,000 lbs., 25x38—90; flat, cut 28½x48, 31¼x45½, 32x42, 35x45, 36x56, 38x48, and 39x50 ins.
Barton, Duer & Koch Paper Co... 6.32c

No. 38—1,000,000 lbs., 25x38—100; flat, cut any size, min. width 24 ins., max. width 48 ins.
Barton, Duer & Koch Paper Co... 5.87c

No. 39—400,000 lbs., 25x38—120; flat, cut any size, min. width 24 ins., max. width 48 ins.
Barton, Duer & Koch Paper Co... 6.55c

(Continued on page 14)

Two More Canadian Mills Are Contemplated

Kimberly-Clark Corp. and Brompton Pulp & Paper Co. Plan To Build Pulp Mills—High Priority May Be Given For Starting Work Soon—Abitibi Motion To Be Heard This Week—Other Late News.

[FROM OUR REGULAR CORRESPONDENT]

APPLETON, Wis., March 20, 1944—Kimberly-Clark Corporation of Canada, Ltd., will build a new creped wadding mill at Kapuskasing, Ontario, it was announced last week by Cola G. Parker, president. The new company is a wholly-owned subsidiary of Kimberly-Clark Corporation, Neenah, Wis., of which Mr. Parker is also president. Kimberly-Clark, the parent company, is one of the oldest manufacturers of paper and paper specialties in the United States.

Mr. Parker estimated the cost of the building at $350,000, but the project also calls for erection of houses for employes, and he said that the total investment, which will not involve any public financing, will be in excess of $1,000,000.

Hill-Clark-Francis, Ltd., of New Liskeard, Ontario, has been awarded the contract to erect the new mill building, and will start work at once, since plans call for completion at the earliest possible date.

About three and a half acres of land are being acquired for the project. Initial installation will consist of one creped wadding machine, with auxiliary equipment. The buildings will occupy about 40,000 square feet, but provisions have been made for later expansion.

The new mill will manufacture a basic material, production of which by the parent company has heretofore been confined to the United States. The product of the new mill will be further manufactured in Canada and will replace material heretofore imported.

According to a Toronto, Ont., report, in addition to the $10,000,000 bleached kraft pulp mill of Marathon Papar Mills of Canada, Ltd., to be started next month near Peninsula, Ont., by the Foundation Company of Ontario, Ltd., as announced last week, two other paper companies are mentioned as preparing extensions to plant.

Following virtual completion during 1943 of war industry construction, Federal Construction Controller John Schofield has let it be known that high priority civilian industry may proceed, in appropriate cases, with plant expansion or improvements. Accordingly the Kimberly-Clark Corporation (Spruce Falls Pulp and Paper subsidiary) will follow the Marathon Company's example and proceed with the construction of a million-dollar crepe wadding mill at Kapuskasing, Ont., and Brompton Pulp and Paper Company will proceed with a smaller construction job near Fort William, Ont.

Hopes to Rebuild Sangamon Mill

Sam J. Cohen, manager of the Sangamon Paper Mill, Kaukauna, Wis., which was destroyed by fire early in the morning of February 28, has expressed his hopes of rebuilding the mill. Company officials estimated the loss at $300,000.

In a letter to Mayor L. F. Nelson of Kaukauna, Mr. Cohen stated he was leaving for the East to try to locate equipment to rebuild the mill. "We are going to make every effort to rebuild in Kaukauna, for we very much appreciate the splended cooperation we have received from the city officials, the people who were in our employ, and the people we have done business with in your fine city," he declared.

Approves Mill Labor Pay Increase

An increase of 4 cents per hour in the common labor rates of 251 employes of the Flambeau Paper Company, Park Falls, Wis., was approved March 11 in Chicago by the Sixth Regional War Labor Board. The firm and Local 119 of the International Brotherhood of Pulp, Sulphite and Paper Mill Workers submitted an agreement, providing that the rates for pulp and paper mill workers be increased from 59 to 63 cents an hour, effective as of November 1, 1943.

Thilmany Adds To Workers' Benefits

Employes of Thilmany Pulp and Paper Company, Kaukauna, Wis., are to have greatly enlarged group insurance benefits, effective April 1, the board of directors of the Thilmany Employes Association announced last week.

Heretofore employes have been eligible for hospitalization and surgical benefits for themselves and their families, and for $1,000 of life insurance and $9 weekly for sickness and off-duty accidents. The new program increases life insurance to $3,000, and sickness and off-duty accident benefits to $18 weekly. It also provides for reimbursement for 50 per cent of dental expenses to a maximum of $50 per year, and 50 per cent of optical expenses to a maximum of $30 per year. Compensation will range from $75 to $2,000 for loss of eyes, hands, arms, feet, etc.

This broad coverage has been made possible at reduced premium rates to the employe because of substantial contributions by the company.

Gilbert Co. Honors George Rank

The Gilbert Paper Company, Menasha, Wis., and its employes honored George Rank last Wednesday evening in observance of his fiftieth anniversay in the service of the company.

He was presented with a $500 war bond by A. C. Gilbert, company president, at a testimonial dinner at the Valley Inn, Neenah. Following the presentation, Mr. Rank recalled incidents of the early days of the paper mills, whereupon other guests volunteered with stories of former years of the company. Employes of 40 years or more of service were guests.

Now Dillard Paper Co.

The charter of the Roanoke Paper Company has been amended to change the name to Dillard Paper Company and the address is P. O. Box 1111, Roanoke 5, Va.

The officers of the new corporation are as follows: Stark S. Dillard, president; T. J. Craig, vice president and sales manager; W. L. Wilhelm, vice president; M. R. Robertson, secretary-treasurer.

Superintendents Meet at Kalamazoo

KALAMAZOO, Mich., March 20, 1944—The Michigan Division of the American Pulp and Paper Mill Superintendents Association held their March meeting Thursday evening of last week at the Park American Hotel with an attendance of 65. Following dinner with Chairman Glen Sutton presiding the date of the annual ladies night dinner was announced as Saturday, May 6. The Program Committee, Mr. Sutton announced, was hard at work on the arrangements and he was assured that the party would be comparable to those of former years.

Two new members of the Division were introduced, Chas. McAleer and Earl Drinton both of the Sutherland Paper Company.

Three representatives of the Goodyear Tire and Rubber Company, T. B. Walker manager of the Akron division assisted by Lt. Edwin M. Dancey and H. S. Montgomery, put on the program. Mr. Walker gave a brief address, "Synthetic Rubber as Pertaining to Paper Mill Operation" being the topic.

Three films were shown the first showing the ten mile conveyor belt in operation on the Shasta dam project in California. This belt manufactured by the Goodyear Company carries the gravel ten miles over the mountains from Redding to the dam site. The second showed the East India natural rubber industry and the third, a very recent one, showed in detail the manufacturing processes of synthetic rubber.

Lt. Dancey as an army engineer took active part in the New Guinea campaign and related to the group, his experiences in the Owen Stanley mountains.

Those attending were: William Astle, R. L. Barton and J. A. Dean, Michigan Paper Company, R. C. Alden, Watervliet Paper Company; Ralph Atkins and C. E. Gardner, Lee Paper Company; N. M. Brisbois, vice president, Fibreboard Products, Inc.; Robert Buss, F. L. Chappel, A. G. Dreis and A. R. Klosterman, Hercules Powder Company; D. D. Bachelder, E. A. Dunton, J. A. Hernan, C. F. McAleer, C. B. Rady, Al Sherwood, Glen Sutton, Fred Weirich, John Worst and Arnold Weller, Sutherland Paper Company; R. H. Blackmore and J. H. Kessler, Walworth Company; Jake Boodt, Kalamazoo Paper Company; Herbert Brown, W. M. Carroll and C. W. Swanson, Allied Paper Company; W. F. Costello, Jos. Longhead Company; Wayne Crotty and E. T. A. Coughlin, Bryant Paper Company; A. E. Cox, Gerrard Steel Strapping Company; Glenn Cathey, B. G. Goodrich Company; O. U. Callighan, Edgar Brothers Company; A. U. Cole, Hod Heath, Henry Nendorf and Joe Waber, Rex Paper Company; Henry Draudt, Price & Pierce; Jack Dickson, R. T. Vanderbilt Company; Lt. Edwin N. Dancey, H. Montgomery and T. B. Walker, Goodyear Tire and Rubber Company; Frank B. Eilers, Orr Felt Company; D. B. Gearhart, General Electric Company; J. N. Gammon, National Oil Products Company; R. W. Holden, Stowe-Woodard, Inc.; Thomas B. Hennessey and R. M. Shen, Otsego Falls Paper Company; J. F. Hansen, Reed Manufacturing Company; C. A. Harding, Shuler & Benninghofen Company; Carl Hoelderle, Anheuser Busch Company; C. P. Kirchen, American Cyanamid and Chemical Company; Al Kimball, Kimball Hardware and Supply Company; L. H. LaLiberte, Al Perlick, Geo. H. Rice, and R. B. Stewart, Kalamazoo Vegetable Parchment Company; L. M. Monreig, U. S. Rubber Company; Art McPhillips, Simmonds Worden White Company; J. W. McClaren, National Starch Products Company; W. A. Moore, R. H. Siple and J. H. Wehan, Corn Products Company; Wm. Poterek; P. W. Proctor; A. W. Riedwl, Riedel Brush Company; H. E. Stafford; F. A. Soderberg and Paul Screiber, General Dyestuffs Corporation.

OPA Defines "Grade" in Book Paper

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., March 22, 1944—The definition of "grade" in the book paper price regulation was clarified by the Office of Price Administration today.

To avoid the possibility of any misunderstanding, an amendment to that regulation expressly sets forth what has always been the intent of OPA and the generally accepted application of the regulation to the various grades of book paper sold, OPA said.

Ceilings are established on book paper at the manufacturer level in this regulation. Two categories are provided. One covers spot or non-contract, sales to merchants and all sales to the Federal Government. The other covers all other sales.

Today's clarification incorporates in the definition of "grade" the statement that, when used in the first category, which is known as Appendix A, the term "grade" refers to any group of brands of book paper which prior to the issuance of the regulation (August 19, 1943), was recognized and accepted in the trade under the designation of the particular grade name.

A further statement is added that, while each "grade" in this sense embraces book paper considered in the trade as having various common characteristics or as being of equivalent value, the regulation does not attempt to determine whether a particular brand of book paper has been properly grouped by the trade on the basis of such characteristics or value, but merely to determine that the brand involved was, in fact, treated by buyers and sellers of book paper as falling within the group denoted by the particular grade name.

Appendix A contains a complete list of regularly accepted brand papers, which qualify for dollar-and-cents ceilings established on 14 standard grades of book paper. Unlisted papers whose sales come under this same category take ceilings based on price differentials as between them and the standard grades in the base period October 1, 1941 to March 31, 1942. Base period prices also determine ceilings for the second category sales.

South Coventry Plant Burned

The plant at South Coventry, Conn., operated by Sterlite Fibre Products, Inc., and owned by the Sterling Fiberboard Company, was damaged by fire to the extent of $75,000 on March 5. The stock house and other adjacent buildings were not greatly damaged, but the main building containing the machinery was badly gutted. The plant contained one 50-inch double cylinder and produced rubber cellulose fiber products for the shoe industry. Because of present conditions, plans at the present time for rebuilding are, naturally, very uncertain.

Obituary

Dr. James Brodbeck

Dr. James Brodbeck, president and chairman of the Board of the Society of Chemical Industry in Basle ("CIBA"), Basle, Switzerland, died suddenly, Sunday, February 20, at his country home in Gstaad, near Berne, Switzerland, at the age of 61.

Dr. Brodbeck joined the staff of Ciba in Basle in 1906. He was instrumental in organizing its Branches throughout the world and in acquiring the various Ciba Plants in countries outside of Switzerland. He was also a director of many other corporations in

DR. JAMES BRODBECK

Switzerland, and of many of the Ciba organizations.

Dr. Brodbeck had traveled extensively in the interest of Ciba, and leaves a host of friends all over the world. He is survived by his wife and his son, Mr. J. J. Brodbeck, president of the Ciba Pharmaceutical Products Corporation of Summit, N. J.

Jerome Freeman Ross

Jerome Freeman Ross, 48, assistant traffic manager of the Great Northern Paper Company, died March 5 at Bangor, Me. His office was in Boston and his residence at 276 Church street, Newton, Mass. Born in Bridgewater, Me., he passed most of his early life in Bangor, entering the employ of the Great Northern Paper Company in 1916. He was transferred in 1919 to Boston and was named assistant traffic manager in 1936.

He was a member of Aberdour Lodge, St. Paul's Royal Arch Chapter, Boston Commandery No. 2, Knights Templar, and Aleppo Temple, Order of the Mystic Shrine.

There are living his mother, Mrs. Mary M. Ross; a sister, Mrs. Arthur M. Bean; a brother, Charles S. Ross; two nieces and a nephew, all of Bangor, and a nephew, of the U. S. Navy.

Fred A. Royse

GLENS FALLS, N. Y., March 20, 1944—Fred A. Royse, age 66 years, superintendent of the Paper Mill Division of the Imperial Paper and Color Corporation, Plattsburgh, N. Y., died February 16. Mr. Royse was superintendent of the mill for the past 27 years. He was widely known and well liked in the industry many of whom attended his funeral.

He is survived by his widow, Lillian; by two daughters, Mrs. Myrle Mooney and Mrs. Beatrice Garrant; by two granddaughters, Shirley Howard and Dian Garrant and one sister, Mrs. Russell Wood.

Charles B. Fritz

PHILADELPHIA, Pa., March 20, 1944—Charles B. Fritz, president and director of the Glassine Paper Company of Conshohocken, Pa., died of a heart ailment at his home at Edgewater Park, N. J., March 16. He was 81 years old. Mr. Fritz was a leading importer of oriental rugs and a former official of the Oriental Carpet Manufacturers, Ltd.

John Stagmaier

The death is announced on Monday, February 14 of John Stagmaier, president of the Tennessee Paper Mills, Inc., Chattanooga, Tenn.

Awards Waste Paper Contracts

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., March 22, 1944—The Treasury Department today announced the award of contracts for the removal and sale of Government wastepaper to the United Paperboard Company, Inc., of New York City.

The contracts, which will run until June 30, 1946, involve Government-owned wastepaper of various types and will not become effective until April 1. This date was selected as the earliest date on which the United Paperboard Company can reasonably be expected to complete arrangements to handle the paper.

The Treasury Department states that the Government will receive in excess of $25,000 a month under the new arrangement. Most of the items offered for sale will bring OPA ceiling prices.

The United Paperboard Company was one of 6 firms competing for this business. One of the other firms, offering a slightly higher price for certain types of paper, was disqualified on the basis of information from the Office of Price Administration to the effect that the company has a bad record of compliance with OPA price regulations.

Goes with Am. Resinous Chemicals

American Resinous Chemicals Corporation of Peabody, Mass. announces the association of Ray C. Martin with its company, as director of the coatings division.

Mr. Martin was previously associated with War Production Board in Washington, D. C. where he served with the Chemicals Bureau, Plastics Division. His direct responsibilities there were as consultant on cellulose plastics and in an administrative capacity on vinyl resins.

Previous to his War Production Board connection, Mr. Martin was a consultant to the paint, varnish and lacquer industry and has been directly associated with this field for the past twenty years. He is the author of several publications, among them "Lacquer and Synthetic Enamel Finishes."

In his new capacity, Mr. Martin will coordinate all development work on specialty protective coatings, resin solvent systems and hot melt adhesives.

TREMENDOUS PUBLIC PROMISE

YRENE

it ideal for storage battery cases, chemical apparatus and other similar applications. Possessing, also, unusual electrical insulating properties—especially at high frequencies—it is acting as special insulation for radio and other high frequency equipment, switch boxes, and the like.

Polystyrene (STYRON) is a lustrous, translucent material that can be produced in all the hues of the rainbow. It can be fashioned into exquisite pieces of costume jewelry, dress trimmings—or for home decoration in lamp bases, lighting fixtures, art pieces, and innumerable other applications.

Polystyrene may, too, lead us to new advances in the field of temperature insulation. Its future is rich in fresh possibilities.

DOW—PIONEER PRODUCER

Dow was a leader among the pioneer styrene producers. It bent its efforts to solve the main stumbling block to successful full-scale styrene production—a process assuring constant, undeviating purity.

And Dow chemists and chemical engineers found the answer to this problem—giving Dow the distinction of being the first—and now the largest—American producer of styrene and polystyrene.

When war struck—Dow was given the grave responsibility of multiplying manyfold its existing styrene production—and with the utmost speed.

It is a matter of record that Dow completed this expansion program ahead of schedule—and is now operating four great plants, ranging from Canada to California, to turn out the huge tonnages of styrene our country needs.

To every thinking American such accomplishments on the part of industry should stand as beacons of inspiration. For developments such as these are the basis for a new, soundly prosperous America—an America of fresh opportunity—of more work for the worker and greater benefits for all. Styrene is truly a chemical that carries tremendous public promise.

YRENE AND POLYSTYRE (Trade ... STYRON)

DOW

CHEMICALS INDISPENSABLE TO INDUSTRY AND VICTORY

OPEN PAPER BIDS FOR U. S. PRINTING OFFICE

(Continued from page 7)

Coated Book

No. 41—300,000 lbs., 25x38—140; flat, cut 38x48, 39x50, and 41x52 ins.; the grain to run lengthwise of the sheet.

No bids

Dull Coated Book

No. 42—17,000 lbs., 25x38—140; flat, cut 28x41 ins., the grain to run lengthwise of the sheet.

No bids

Ground Wood Mimeograph

No. 44—800,000 lbs., No. 36; flat, cut 32½x42½, and 38x48½ ins., grain as ordered.

Barton, Duer & Koch Paper Co...	5.75c
Mead Sales Co.	5.80c
Marquette Paper Corp. (400,000 lbs. only)	5.75c
Old Dominion Paper Co.	5.6925c

Chemical Wood Mimeograph, White and Colored

No. 45—1,800,000 lbs., white, No. 36; flat, cut 32½x42½ and 38x48½ ins.; the grain to run as ordered.

R. P. Andrews Paper Co. (400,000 lbs. only)	6.88c
Whitaker Paper Co. (400,000 lbs. only)	6.91c
Eastern Corp.	8.63c

25 Per Cent Mimeograph

No. 47—400,000 lbs., No. 36; flat, cut 32½x42½, 34½x44, and 38x48½ ins.; the grain to run as ordered.

Virginia Paper Corp.	10.00c
Old Dominion Paper Co. (200,000 lbs. only)	9.37c
(200,000 lbs. only)	10.18c
Aetna Paper Co.	9.37c

Blue U S M O Safety Writing

No. 48—200,000 lbs., No. 32; rolls, 22 ins. wide, 24 ins. in diameter (3-inch fiber cores).

R. P. Andrews Paper Co.	12.83c
D. L. Ward Co.	12.18c

Ground Wood Writing, White and Colored

No. 50—800,000 lbs., white, No. 32; flat, cut any size, min. width 28 ins., max. width 48 ins.

Barton, Duer & Koch Paper Co...	6.40c
Marquette Paper Co. (400,000 lbs. only)	6.40c

No. 51—1,200,000 lbs. white, No. 36; flat, cut any size, min. width 28 ins., max. width 48 ins.

Frank Parsons Paper Co. (800,000 lbs. only)	6.40c
Barton, Duer & Koch Paper Co...	6.40c
Marquette Paper Corp. (400,000 lbs. only)	6.40c

No. 52—200,000 lbs. blue, buff, green, pink, salmon and yellow, No. 36; flat, cut any size, min. width 28 ins., max. width 48 ins.

Mudge Paper Co. (44,000 lbs. only)	6.65c
Bermigham & Prosser Co. (100,000 lbs. only)	6.65c

Chemical Wood Writing, White and Colored

No. 55—2,000,000 lbs., white, No. 32; flat, cut any size, min. width 21 ins., max. width 48 ins.

Bulkley, Dunton & Co. (500,000 lbs. only)	7.69c
Barton, Duer & Koch Paper Co... (1,000,000 lbs. total lots 55 to 58)	7.80c
Whitaker Paper Co. (1,400,000 lbs. total lots 55 to 58)	7.69c
Marquette Paper Co.	7.85c

No. 56—3,000,000 lbs., white No. 36; flat, cut any size, min. width 21 ins., max. width 48 ins.

R. P. Andrews Paper Co. (1,000,000 lbs. only)	7.23c
Barton, Duer & Koch Paper Co... (1,000,000 lbs. total lots 55 to 58)	7.25c
Mudge Paper Co. (500,000 lbs. only)	7.36c
Whitaker Paper Co. (1,400,000 lbs. total lots 55 to 58)	7.44c

No. 57—500,000 lbs., white, No. 32; rolls, min. width 16 ins., max. width 48 ins (3-inch fiber cores).

Bulkley, Dunton & Co. (200,000 lbs. only)	7.515c
Barton, Duer & Koch Paper Co... (1,000,000 lbs. total lots 55 to 58)	7.50c
Whitaker Paper Co. (1,400,000 lbs. total lots 55 to 58)	7.09c
Marquette Paper Corp.	7.61c

No. 58—500,000 lbs., white, No. 36; rolls, min. width 16 ins., max. width 48 ins. (3-inch fiber cores).

R. P. Andrews Paper Co.	6.99c
Barton, Duer & Koch Paper Co... (1,000,000 lbs. total lots 55 to 58)	7.00c
Whitaker Paper Co. (1,400,000 lbs. total lots 55 to 58)	7.09c

No. 59—500,000 lbs., blue, buff, green, pink, salmon and yellow Nos. 32 and 36; flat, cut any size, min. width 21 ins., max. width 48 ins. Min. order, one color, 10,000 lbs.

Marquette Paper Corp. (32 lbs.)	8.54c
(36 lbs.)	8.09c

No. 60—50,000 lbs., blue, buff, green, pink, salmon and yellow, No. 32; rolls, 38 ins. (3-inch fiber cores).

No bids

50 Per Cent Lithograph-Finish Map

No. 64—50,000 lbs., Nos. 32 and 40; flat, cut any size, min. width 22 ins., max. width, 48 ins., the grain to run lengthwise of the sheet.

Paper Supply Co.	17.50c
Barton, Duer & Koch Paper Co...	14.94c
Stanford Paper Co.	15.50c
	16.50c
Aetna Paper Co.	15.47c

Chemical Wood Manifold, White and Colored

No. 71—400,000 lbs., white, No. 18; flat, cut 21x32, and 32x42 ins.; the grain to run 21-inch and 42-inch ways.

North American Pulp & Paper Co. (100,000 lbs. only)	11.50c
Graham Paper Co. (200,000 lbs. only)	9.69c

No. 73—200,000 lbs., blue, green, pink, and yellow, No. 18; flat, cut 21x32, 22x34, 28x34, 32x42, and 34x44 ins; the grain to run the 21-inch and 42-inch ways. Min. order, one color 5,000 lbs.

North American Pulp & Paper Co. (50,000 lbs. only)	12.50c
Graham Paper Co.	10.19c

50 Per Cent Manifold, White and Colored

No. 76—300,000 lbs., white, No. 18; flat, cut 21x32, 22x34, 28x34, 32x42, and 34x44 ins.; the grain to run the 21-inch and 42-inch ways.

Walker, Goulard Plehn Co. (50,000 lbs. only)	20.50c
Barton, Duer & Koch Paper Co... (150,000 lbs. only)	18.18c
(150,000 lbs. only)	18.60c
Stanford Paper Co. (120,000 lbs. only)	18.80c
Paper Corp. of U. S. (50,000 lbs. only)	19.72c
Old Dominion Paper Co. (50,000 lbs. only)	17.99c
(50,000 lbs. only)	18.49c

No. 78—130,000 lbs., blue, cherry, green, pink, salmon and yellow, No. 18; flat, cut 21x32, 22x34, 28x34, and 34x44 ins.; the grain to run the 21-inch way on the 21x32-inch size. Min. order, one color, 5,000 lbs.

R. P. Andrews Paper Co. (40,000 lbs. only)	21.10c
Barton, Duer & Koch Paper Co...	18.85c
Old Dominion Paper Co. (50,000 lbs. only)	18.74c
(50,000 lbs. only)	18.49c

Chemical Wood Bond, White and Colored

No. 101—200,000 lbs., white, No. 26; flat, cut any size, min. width 21 ins.; max. width 38 ins.

Eastern Corp.	11.46c
Aetna Paper Co. (100,000 lbs. only)	10.43c

No. 102—100,000 lbs., white, No. 32; flat, cut any size, min. width 21 ins.; max. width 38 ins.

Eastern Corp.	9.31c

No. 103—50,000 lbs., blue, No. 32; flat, cut 32x42 ins.

Eastern Corp.	10.04c

No. 104—150,000 lbs., blue, buff, green, pink, salmon, and yellow, No. 26; flat, cut any size, min. width 21 ins., max. width 38 ins. Min. order, one color, 5,000 lbs.

Walker, Goulard Plehn Co. (50,000 lbs. only)	12.37c
Bermigham & Prosser (50,000 lbs. only)	12.36c
Eastern Corp.	12.36c
Aetna Paper Co.	11.31c

25 Per Cent Bond, White and Colored

No. 105—150,000 lbs., white, No. 26; flat, cut any size, min. width 21 ins.; max. width 48 ins.

Whitaker Paper Co. (75,000 lbs. only)	16.48c
(75,000 lbs. only)	17.91c
Aetna Paper Co.	15.37c

No. 106—800,000 lbs., white, No. 32; flat, cut any size, min. width 21 ins., max. width 48 ins.

Walker, Goulard Plehn Co. (160,000 lbs. total lots 106, 107, 108, 110 and 111)	14.43c
Barton, Duer & Koch Paper Co... (180,000 lbs. only)	14.55c
Collins Mfg. Co. (150,000 lbs. only)	14.25c
Whitaker Paper Co. (75,000 lbs. only)	13.86c
(75,000 lbs. only)	14.55c
Aetna Paper Co.	13.37c

No. 107—800,000 lbs., white, No. 32; flat, cut any size, min. width 21 ins., max. width 48 ins.

Walker, Goulard Plehn Co. (160,000 lbs. total lots 106, 107, 108, 110 and 111)	14.43c
Collins Mfg. Co. (150,000 lbs. only)	14.25c
Whitaker Paper Co. (75,000 lbs. only)	13.86c
(75,000 lbs. only)	14.55c
Aetna Paper Co.	13.37c

No. 108—800,000 lbs., white, No. 32; flat, cut any size, min. width 21 ins., max. width 48 ins.

Walker, Goulard Plehn Co. (160,000 lbs. total lots 106, 107, 108, 110, and 111)	14.43c
Collins Mfg. Co. (150,000 lbs. only)	14.25c
Whitaker Paper Co. (75,000 lbs. only)	13.86c
(75,000 lbs. only)	14.55c
Aetna Paper Co.	13.67c

No. 109—25,000 lbs., yellow, No. 26;

(Continued on page 16)

"This CONDENSER will just fit in our Mill"

Yes, it will just fit, because there is an I-R condenser to fit the needs of any pulp or paper mill. It will fit into your operation and maintenance schedules too. You will find it highly efficient and you will find that it requires a minimum of maintenance attention.

There is a complete line of Ingersoll-Rand steam condensers and steam-jet ejectors for prime mover application and for other vacuum services in the paper mill. Ask the Ingersoll-Rand service engineer for further details. Ingersoll-Rand Company, 11 Broadway, New York 4, N. Y.

Ingersoll-Rand

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OPEN PAPER BIDS FOR U. S. PRINTING OFFICE

(Continued from page 14)

flat, cut 34x44 ins. Min. order 5,000 lbs.
Aetna Paper Co. 17.47c

No. 110—200,000 lbs., blue, buff, cherry, green, pink, salmon and yellow, No. 32; flat, cut any size, min. width 21 ins., max. width 48 ins.
Walker, Goulard Plehn Co. .....
(160,000 lbs., total lots 106, 107, 108, 110 and 111) 15.15c
Collins Mfg. Co. .....
(100,000 lbs. only lots 110 and 111) 14.50c
Aetna Paper Co. 13.77c

No. 111—200,000 lbs., blue, buff, cherry, green, pink, salmon and yellow, No. 32; flat, cut any size, min. width 21 ins., max. width 48 ins.
Walker, Goulard Plehn Co. ....
(160,000 lbs. total lots 106, 107, 108, 110 and 111) 15.15c
Collins Mfg. Co. .....
(100,000 lbs. lots 110 and 111) 14.50c
Aetna Paper Co. 13.77c

Chemical Wood White Ledger

No. 151—250,000 lbs., No. 48, flat, cut any size, min. width 17 ins., max. width 48 ins.
Eastern Corp. 9.60c
Aetna Paper Co. .....
(1,000,000 lbs. only) 9.60c

No. 152—200,000 lbs., No. 56; flat, cut any size, min. width 17 ins., max. width 48 ins.
Willcox, Walter Furlong Paper Co. 8.28c
Eastern Corp. 9.60c

No. 153—130,000 lbs., No. 48; rolls, 34 and 48 ins. wide (3-inch fiber cores).
Willcox, Walter Furlong Paper Co. 7.78c
Eastern Corp. 9.36c

25 Per Cent Ledger, White and Colored

No. 154—150,000 lbs., white, No. 48; flat, cut 22x34, 24x38, 28x34, 32x42 and 34x44 ins. Min. order, one substance, 5,000 lbs.
Collins Mfg. Co. .....
(50,000 lbs. total lots 154,155) 14.30c
Central Ohio Paper Co. .....
(200,000 lbs. lots 154,155).. 14.135c
Aetna Paper Co. 13.47c

No. 155—200,000 lbs., white, No. 56; flat, cut 22x34, 24x38, 28x34, 32x42 and 34x44 ins. Min. order, 5,000 lbs.
Collins Mfg. Co. .....
(50,000 lbs. total lots 154,155) 14.30c
Central Ohio Paper Co. .....
(200,000 lbs. total lots 154 and 155) 14.135c
Aetna Paper Co. 13.47c

No. 156—50,000 lbs., blue, buff, cherry, green, pink, salmon and yellow, No. 56; flat, cut 24x38, 28x34, and 34x44 ins. Min. order, one substance, one color, 5,000 lbs.
Collins Mfg. Co. 14.80c
Aetna Paper Co. 14.27c

Chemical Wood White and Colored Index

No. 183—300,000 lbs., white, 22½x28½—148; flat, cut any size, min. width 17 ins., max. width 42 ins.
Frank Parsons Paper Co. 6.79c
Willcox, Walter Furlong Paper Co. 7.99c

No. 184—500,000 lbs., white, 22½x28½—182 and 230; flat, cut 34½x44 ins., with projecting colored-paper marker between each 100 sheets. Min. order, one weight, 10,000 lbs.
Willcox, Walter Furlong Paper Co. 7.99c
Whitaker Paper Co. .....
(200,000 lbs. only) 7.67c

No. 185—60,000 lbs., buff, 22½x28½—182; flat, cut 32½x42 ins.
Paper Corp. of U. S. 8.75c
Willcox, Walter Furlong Paper Co. 8.49c

50 Per Cent Index, White and Colored

No. 189—100,000 lbs., white, 22½x28½—148; flat, cut 24x38, 28x34, and 34½x44 ins., with projecting colored-paper marker between each 100 sheets. Min. order, 10,000 lbs.
R. P. Andrews Paper Co..... 16.34c
Walker, Goulard Plehn Co. .....
(10,000 lbs.) 16.00c
(20,000 lbs.) 15.75c
(30,000 lbs.) 15.45c
(50,000 lbs.) 15.20c
Barton, Duer & Koch Paper Co. .. 11.80c
Whitaker Paper Co. 15.90c
Aetna Paper Co. 14.47c

No. 190—500,000 lbs., white, 22½x28½—182 and 230; flat, cut 24x38, 28x34, 32½x42, and 34½x44 ins., with projecting colored-paper marker between each 100 sheets. Min. order, one weight, 10,000 lbs.
Walker, Goulard Plehn Co. ....
(10,000 lbs.) 15.80c
(20,000 lbs.) 15.45c
(30,000 lbs.) 15.15c
(50,000 lbs.) 14.90c
(100,000 lbs.) 14.70c
Barton, Duer & Koch Paper Co. .. 13.35c

No. 191—450,000 lbs., blue, buff, cherry, fawn, green, pink, salmon and yellow, 22½x28½—182 and 230; flat, cut 24x38, 28x34, and 34½x44 ins., with projecting colored-paper marker between each 100 sheets. Min. order, one color, one weight 5,000 lbs.
Walker, Goulard Plehn Co. .....
(5,000 lbs.) 16.80c
(10,000 lbs.) 16.20c
(20,000 lbs.) 15.85c
(30,000 lbs.) 15.55c
(50,000 lbs.) 15.30c
(100,000 lbs.) 15.10c
Barton, Duer & Koch Paper Co. .. 13.95c

No. 192—125,000 lbs., blue, buff, cherry, fawn, green, pink, salmon and yellow, 22½x28½—148; flat, cut 24x38, 28x34, and 34½x44 ins., with projecting colored-paper marker between each 100 sheets. Min. order, one color, one weight, 5,000 lbs.
R. P. Andrews Paper Co. 17.03c
Walker, Goulard Plehn Co. .....
(5,000 lbs.) 16.73c
(10,000 lbs.) 16.5c
(20,000 lbs.) 16.15c
(30,000 lbs.) 15.85c
(50,000 lbs.) 15.60c
Barton, Duer & Koch Paper Co. .. 12.30c
Aetna Paper Co. 14.97c

100 Per Cent White Index

No. 195—15,000 lbs., 22½x28½—148; flat, cut 24x38, 28x34, and 32x42 ins.
R. P. Andrews Paper Co..... 22.80c
Barton, Duer & Koch Paper Co. 20.20c
Paper Corp. of U. S. 24.79c

No. 196—60,000 lbs., 22½x28½—approximately 206; flat, cut 20½x30½ and 34½x44 ins.
R. P. Andrews Paper Co. 22.95c
Barton, Duer & Koch Paper Co. .. 20.00c
Paper Corp. of U. S. 24.79c

Coated Cover, White and Colored

No. 201—25,000 lbs., white, 20x26—120; flat, 26½x41 ins., the grain to run lengthwise of the sheet. Min. order, 5,000 lbs.
No bids

No. 202—15,000 lbs., India tint and light green, 20x26—100; flat, 26½x41 ins. Min. order, 5,000 lbs.
No bids

Antique-Finish Cover, White and Colored

No. 203—150,000 lbs., antique; white, blue, buff, dawn, quaker drab, terra cotta, gray, brown, green, gobelin blue, granite, tea and yellow; flat, 19½x25¼—95, with projecting colored-paper marker between each 500 sheets. Min. order, one color, 5,000 lbs.
R. P. Andrews Paper Co. 8.74c
Whitaker Paper Co. 8.76c

50 Per Cent Laid Cover, Colored

No. 205—100,000 lbs., blue, cream, white, gray and green, 20x26—130; flat, cut 19½x25¼ and 28x41 ins., with projecting colored-paper marker between each 500 sheets. Min. order, one color, 2,000 lbs.
R. P. Andrews Paper Co. 13.13c

Wood Manila

No. 208—120,000 lbs., 24x36—80 and 100; flat, cut 25x38 and 32x42 ins., with projecting colored-paper marker between each 500 sheets.
Frank Parsons Paper Co. 5.25c

No. 210—40,000 lbs., 24x36—120; rolls, 18-ins. diameter, 4¼, 5¼, and 7½ ins wide, wound on wooden plugs, 1½-n. hole.
Whitaker Paper Co. .....
(4¼ inch rolls) 5.875c
(5¼ and 7½ inch rolls 5.625c

Chemical Wood Manila

No. 211—40,000 lbs., 24x36—140 and 160; flat, cut any size. Min. order, one weight, 5,000 lbs.
No bids

Hemp and/or Jute Manila

No. 213—100,000 lbs., 24x36—160 and 280; rolls, 48 ins. wide (3-inch fiber cores). Min. order, 5,000 lbs.
R. P. Andrews Paper Co. .....
(280 lb.) 17.25c
(160 lb.) 18.25c
Paper Corp. of U. S. 20.50c
Perkins Goodwin Co. .....
(160 lb.) 18.00c
(280 lb.) 17.00c

No. 2 Kraft

No. 219—80,000 lbs., 24x36—80 to 160, rolls, minimum width 9 ins., maximum width 48 ins., wound on wooden plugs, 1½-inch hole, or on 3-inch fiber cores as may be specified.
No bids

25 Per Cent Blotting, White and Colored

No. 254—10,000 lbs., white, flat, 19x24—160, in wrapped bundles. Min. order, 10,000 lbs.
R. P. Andrews Paper Co. 9.24c
Barton, Duer & Koch Paper Co.. 9.15c
Mudge Paper Co. 9.15c
Stanford Paper Co. 9.25c
Central Ohio Paper Co. 9.25c
Virginia Paper Co. 9.15c
Whitaker Paper Co. 11.64c
Old Dominion Paper Co. 9.15c
Garrett-Buchanan Co. 9.25c
Mathers-Lamm Paper Co. 9.00c

No. 255—70,000 lbs., buff, salmon and moss green; flat, 19x24—160, in wrapped bundles. Min. order, one color, 2,000 lbs.
R. P. Andrews Paper Co. 9.72c
Barton, Duer & Koch Paper Co. .. 9.65c
Mudge Paper Co. 9.65c
Stanford Paper Co. 9.50c
Central Ohio Paper Co. 9.50c
Virginia Paper Co. 9.65c
Whitaker Paper Co. .....
(Buff and salmon) 11.64c
(Moss green) 12.85c
Old Dominion Paper Co. 9.65c
Garrett-Buchanan Co. 9.50c
Mathers-Lamm Paper Co. 9.54c

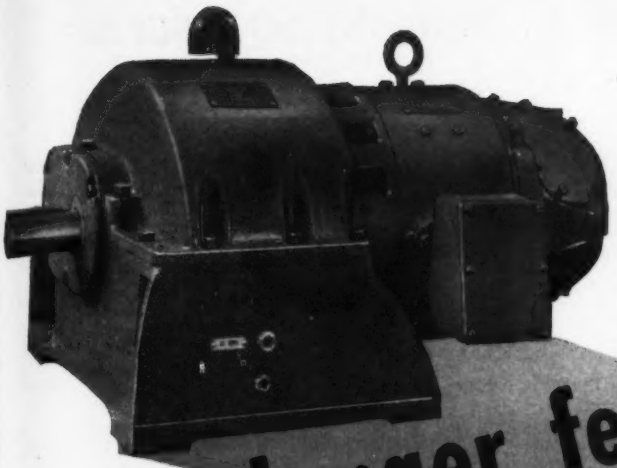
High-Finish Red Sulphite

No. 265—7,500 lbs. flat, 24x36—320, in wrapped bundles. Min. order, 5,000 lbs.
Paper Corp. of U. S. 9.50c

High-Finish Chemical Wood Manila Tag

No. 271—60,000 lbs., 24x36—280; flat, cut any size, min. width 24 ins., max. width 38 ins.
Paper Corp. of U. S. 9.49c
Perkins-Goodwin Co. 9.25c

(Continued on page 18)



for longer felt life better quality more production

WESTINGHOUSE WET END DRIVES

If you expect felt to act as a belt for driving auxiliary rolls, you can expect higher felt costs and decreased production. A felt can only be made strong enough for efficient power transmission by sacrificing its water-removal and sheet-formation properties. The result is shorter felt life, poorer paper quality and more down time.

The remedy is simple—a Westinghouse principle proved in practice—the wet end auxiliary drive. It is equally applicable for sectional electric or mechanical drive machines. Where operating speeds are limited by the power-transmitting capacity of the felt, even one auxiliary power drive will permit increased operating speeds.

Westinghouse wet end auxiliary drives can reduce your felt costs by as much as $1.20 per ton of board—and increase your production and up paper quality at the same time. Complete information is contained in a new booklet, just published. Write today for your copy of B-3275. Westinghouse Electric & Manufacturing Company, Dept 7-N, East Pittsburgh, Pa

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Westinghouse

PLANTS IN 25 CITIES . . . OFFICES EVERYWHERE

WET END AUXILIARY MOTOR DRIVES

OPEN PAPER BIDS FOR U. S. PRINTING OFFICE

(Continued from page 16)

Calendered Tag, Manila and Colored

No. 276—500,000 lbs., manila, 22½x28½—150; rolls, 23¼ and 26½ ins. wide (6-inch fiber cores with metal tips).

Barton, Duer & Koch Paper Co... 8.50c

No.277—100,000 lbs., blue, brown, green, ivory, pink, red, salmon and yellow, 22½x28½—150; rolls 23¼ and 26½ ins. wide (6-inch fiber cores with metal tips). Min. order, one color, 10,000 lbs.

Barton, Duer & Koch Paper Co. .. 9.50c

Jute Tag

No. 280—140,000 lbs., 22½x28½—200 and 280; flat, cut 28x38 ins. Min. order, one weight, 10,000 lbs.

Mudge Paper Co. 11.25c
Perkins-Goodwin Co. 12.00c

Railroad Board, White and Colored

No. 302—35,000 sheets, white, flat, 22x34 ins., 4-ply, each 100 sheets fully banded. Min. order, 10,000 sheets.

Bulkley, Dunton & Co. .....
per M sheets $34.38
Barton, Duer & Koch Paper Co... 34.38
Stanford Paper Co. 34.38
Old Dominion Paper Co. 34.389

No.303—35,000 sheets, white, flat, 22x34 ins., 8-ply each 100 sheets fully banded. Min. order, 5,000 sheets,

Bulkley, Dunton & Co. .....
per M sheets $49.46
Barton, Duer & Koch Paper Co. 49.02
Stanford Paper Co. 49.46
Old Dominion Paper Co. 49.495

No. 305—30,000 sheets, ash gray, green, orange and red, flat, 22x34 ins., 4-ply, each 100 sheets fully banded. Min. order, one color, 5,000 sheets.

Bulkley, Dunton & Co. .....
per M sheets $43.04
Barton, Duer & Koch Paper Co. .. 42.79
Stanford Paper Co. 43.04
Old Dominion Paper Co. 43.039

United States Postal Card Bristol

No. 325—800,000 lbs., 22½x28½—188; rolls, 22 ins. wide, 30 ins in diameter and 33 ins. wide, 36 ins. in diameter (6-inch iron cores).

R. P. Andrews Paper Co. 5.97c
Whitaker Paper Co. 5.91c

No. 326—800,000 lbs., 22½x28½—188; rolls, 22 ins. wide, 30 ins in diameter and 33 ins. wide, 36 ins. in diameter (6-inch iron cores).

Whitaker Paper Co. 6.01c

No. 327—800,000 lbs., 22½x28½—188; rolls, 22 ins. wide, 30 ins. in diameter, 33 ins. wide and 36 ins. in diameter (6-inch iron cores).

Whitaker Paper Co. 6.09c

Pressboard, Colored

No. 352—20,000 sheets, gray, flat, 30x36 ins., thickness .0300 inch. Min. order, 5,000 sheets.

Barton, Duer & Koch Paper Co...
per C sheets $18.85
Whitaker Paper Co. 23.27
Resolute Paper Products Corp. .. 24.42
Mathers-Lamm Paper Co. 24.39

News Board

No.360—500,000 lbs., 26x38 ins., No. 100, flat, cut any size, min. 21x32 ins., max. 40x52½ ins. (to be trimmed square on four sides).

No bids

Binder's Board, No. 1 Quality

No. 366—250,000 lbs., flat, to trim 25x30 ins., Nos. 16, 18, 20, 25, 30 and 40.

Mathers-Lamm Paper Co. 4.165c

No. 367—25,000 lbs., 25¾x30¾ ins., Nos. 12 and 20; flat, to trim 34x44 ins.

No bids

Binder's Board, Best Quality

No. 368—40,000 lbs., flat, to trim 20x30 ins., and 22x28 ins., Nos. 18, 20, 25, 30, 35, 40 and 45. Min. order, 5,000 lbs.

Consolidated Paper Co. 5.87c

Sixth Chemical Formulary

The Chemical Publishing Company has recently published a 635 page book entitled the Sixth Chemical Formulary, edited by H. Bennett. Many of the chemists entering industry soon find that the bulk of the products manufactured by this concern are not synthetic or definite chemical compounds but mixtures, blends or highly complex compounds of which he knows little. This book is a good guide to the general subject of compounding and gives a great amount of practical suggestions that will give ideas to anyone engaged in research. Some of the subjects covered are adhesives, emulsions, links, lubricants and oils, materials of construction, lacquers and coatings, paper, resin, plastics and waxes, soaps and cleaners, fibers, etc. The chapter on paper is rather meagre but this would be of less interest to a paper chemist than many of the other chapters.

Copies may be obtained from the Book Department of the Technical Association of the Pulp and Paper Industry, 122 East 42nd street, New York City, at $6.00 per copy.

Bailey Meter Appoints New Managers

Bailey Meter Company, Cleveland, announces the appointment of N. M. Barnett as manager of its Chicago Branch Office, 1041 Marquette building. He succeeds M. Greenberg former manager whose resignation became effective February 1. Mr. Barnett is a mechanical engineering graduate of the University of Kentucky and has been connected with Bailey Meter Company for over 20 years. He was manager of the Company's Detroit Office prior to his transfer to Chicago.

Mr. Barnett has had a wide experience in power plant engineering and combustion work, particularly with reference to the solution of metering, controlling and regulating problems.

The vacancy created by Mr. Barnett's transfer to Chicago has been filled by Ralph T. Cowan, formerly of the Detroit and Cleveland Sales Offices of Bailey Meter Company.

Mr. Cowan who is a graduate of Case School of Applied Science, has also specialized in the problems involved in applying metering and automatic control equipment to power plants and industrial processes.

Bailey Meter Company headquarters in Detroit are at 226 Curtis Building.

J-M Transite Pressure Pipe

Johns-Manville has compiled and has ready for distribution a 128 page manual for pulp and paper mills in the United States and Canada which use or plan to use J-M Transite Pressure Pipe in their plants. The manual is based on the company's experience with hundreds of above-ground pipe installations in the pulp and paper industry.

It is fully illustrated with photographs, detailed drawings and diagrams of transite pressure pipe and couplings and their assembly and installation. It explains how to make connections to fittings and to equipment, how to handle, support and brace the material, and also contains complete reference tables of accessories. It shows scores of photographs of typical installations and gives a long list of mills that have installed Transite Pressure Pipe with their names, locations and the amount and pressure class of pipe used.

The manual is 8½ x 11 inches in size, and is called J-M Transite Pressure Pipe for the Pulp and Paper Industry. Copies may be obtained by writing Johns-Manville, 22 East 40th Street, New York 16, N. Y.

Bill Kearney Joins Baldwin

The appointment of William B. Kearney as sales manager of its Technical and Specialty Papers Department has been announced by Sam'l S. Himmell, president of the Baldwin Paper Company, Inc.

Bill Kearney is an old timer in the paper business—having entered the employ of the Dennison-Pratt Paper Company in 1919, immediately after being mustered out of the 27th Division, Heavy Artillery, where he served as a Sergeant in World War I. In 1923 Bill joined the sales force of the Seaman Paper Company; leaving there in 1928 to go with Fred C. Strype, Inc.; and in 1931 with the Diamond Mills Paper Company, where he was sales manager until his recent association with Baldwin.

Bill Kearney will bring to the Baldwin Paper Company, Inc., a wide, varied and successful experience with all processes of graphic reproduction in the field of technical and specialized papers, and his broad knowledge and creative ability is based on 25 years' practical experience in working out special-purpose problems with paper technicians and paper laboratories . . . form the triple view-point of the consumer, merchant and mill. He assumes his new duties with the well wishes of a legion of friends throughout the paper and printing industries.

In making the announcement, Sam Himmell says: "We welcome Bill to our official family and we are very pleased with the opportunity his appointment affords in offering our customers and friends the valuable assistance and services which Bill Kearney is so exceptionally qualified to give. Throughout the industry he is regarded as an unusually capable man in the growing and important field of technical and specialty papers."

N. E. Merchants Discuss Pricing

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., March 20, 1944—Regulations of the Office of Price Administration were discussed at a luncheon meeting of the Wrapping Paper Division of the New England Paper Merchants Association at the Parker House March 14. It was the first meeting at which James J. Dwyer, vice-president of the Division, presided.

Garvin Bawden, OPA price executive, and T. Coleman Bahn, OPA attorney, were present to answer questions on pricing problems.

A proposal of the War Production Board to cut further the production of bags in the second quarter of 1944 was discussed.

Mr. Ginsburg gave a report on "Highlights of the 1944 Paper Convention."

C. J. Minnig Joins Witco Chemical

Robert I. Wishnick, President of Witco Chemical Company, has announced the appointment of C. J. Minnig as Vice President.

Mr. Minnig will direct the sales of the company's lines of WITCO and CONTINENTAL carbon blacks and will make his headquarters in the Akron office at 311 Peoples Bank Building.

The Witco Chemical Company was recently sole distributor of CONTINENTAL blacks, manufactured by the Continental Carbon Company of Sunray, Texas.

Paper in the War Effort

Although the paper industry was one of the hardest hit industries at the beginning of this war, it has stepped forward constantly until it is today one of the most valuable assistants in the war effort. This is the statement of John N. Hazen, president of the Coated and Processed Papers Association with headquarters in Providence, R. I., and himself a manufacturing processor in Holyoke, Mass.

The shortage of metal foils for packaging is an important factor in this swerve to paper, and the new grease-proof and moisture-resistant papers are proving themselves to be as good as, if not in some ways better than the metal foils formerly used. The moisture-resistant paper is used, for instance, in the packaging of the familiar K and C emergency rations issued to the armed forces. Mr. Hazen emphasised that grease-proof and moisture-holding paper on packages may be stored in ship holds where they endure temperatures up to 140 and 150 degrees. They may then be taken off the ship in Alaska during a temperature of 40 degrees below zero, and must be able to withstand these two extremes of temperatures. Another vital use for papers which has been developed by this industry is parachute papers used for dropping supplies rather than personnel.

Mr. Hazen predicts that after the war a great many current paper practices will remain. For one thing, the public is, very "packages conscious," and Mr. Hazen forsees a great use of color in packaging to aid post-war merchandising.

Greeting card paper is another extensive use of coated papers which has received great impetus from the war. The custom of sending greeting cards for every occasion, large or small, is growing by leaps and bounds, and bids fair to continue after the war.

An immense export demand may also be expected in future years, Mr. Hazen claims, as European nations call on the United States for Paper goods while their own industries are being restored after German occupation. Moreover, Mr. Hazen tells us, 20% of the pulp used in America before the war came from the Scandinavian countries.

Industrial Chemistry

The third edition of Industrial Chemistry by William Thornton Read, Dean of the School of Chemistry, Rutgers University, has recently been published by John Wiley & Sons, Inc. (631 pp.). This gives a picture of industrial chemistry as it was up to 1942.

Copies may be obtained from the Book Department of the Technical Association of the Pulp and Paper Industry, 122 East 42nd street, New York City, at $5.00 per copy.

What's Ahead for Offset

"What's Ahead for Offset" was the subject of an address by R. V. Mitchell, president of the Harris-Seybold-Potter Company, before the Racine, Wisconsin, Club of Printing House Craftsmen, February 24. Mr. Mitchell cited the remarkable growth of offset lithography over the last twenty years and stressed the opportunity for offset development in post-war. The war, he said, had familiarized many commercial users of printing with advantages of the process.

FINANCIAL NEWS

New York Stock Exchange

High, Low and Last for Week Ending March 18, 1944

STOCKS

	High	Low	Last
A. P. W.	2⅜	2⅜	2⅜
Armstrong Cork Co.	39⅜	37¾	38¾
Celotex Corp.	12⅜	11⅞	12
Celotex Corp., pf.	18	17½	17⅞
Certain-Teed Products Corp.	6	5⅝	5¾
Certain-Teed Products Corp., pf.	65⅜	61¼	61¾
Champion Paper & Fibre Co.	26¼	25	25
Champion Paper & Fibre Co., pf.	111	110½	110½
Congoleum Nairn Co.	24¼	23⅝	24¼
Container Corp. of America	23½	22½	23½
Continental-Diamond Fibre Co.	13¼	12¾	13
Cown-Zellerbach Co.	17¼	17	17¼
Crown-Zellerbach Co., pf.	100	99½	99½
Dixie Cup Co.	16⅜	16	16
Dixie Cup Co.—A	44¾	44½	44½
Flintkote Co.	23⅞	23½	23½
Flintkote Co., pf.	....	....	....
Robert Gair	3⅞	3⅝	3¾
Robert Gair, pf.	15	14⅞	15
International Paper Co.	16⅜	15¼	15¼
International Paper Co., pf.	75⅛	73½	74½
Johns-Manville Corp.	96	92¼	92¼
Johns-Manville Corp., pf.	121 7/16	121 7/16	121 7/16
Kimberly-Clark Corp.	35½	33⅝	33⅝
MacAndrews & Forbes	26¾	26⅝	26¾
MacAndrews & Forbes, pf.	....	....	....
Masonite Corp.	39¾	38⅝	39
Mead Corp.	9⅞	9⅜	9⅜
Mead Corp., pf. A—6%	....	....	....
Mead Corp., pf. B—5½%	....	....	....
National Cohtainer Corp.	15⅜	13½	15
Paraffine Companies, Inc.	49½	49	49½
Paraffine Companies, Inc., pf.	....	....	....
Rayonier, Inc.	15¼	14¾	14⅞
Rayonier, Inc., pf.	30⅜	29⅝	30¼
Ruberoid Co.	29¾	29	29
Scott Paper Co.	39	37½	38
Scott Paper Co., pf.	110	110	110
Sutherland Paper Co.	31	31	31
Union Bag & Paper Corp.	11	10½	10½
United Paperboard Co.	5⅜	5	5⅛
U. S. Gypsum Co.	75	72½	72½
U. S. Gypsum Co., pf.	180	178¾	180
West Virginia Pulp & Paper Co.	18¾	18¼	18¼
West Virginia Pulp & Paper Co., pf.	106¼	106¼	106¾

BONDS

Abitibi Pulp & Paper Co., 5s '53	71⅝	71⅝	71⅝
Celotex Corp. 3¾s '55	....	....	....
Certain-Teed Products Corp. 5½s '48	101	100	101
Champion Paper & Fibre Co. 4¾s '50	....	....	....
International Paper Co. 6s '55	108	107	107
International Paper Co. 5s '47	104¼	104	104¼
Mead Corp. 3½s '53	....	....	....
West Virginia Pulp & Paper Co. 3s '54	....	....	....

New York Curb Exchange

High, Low and Last for Week Ending March 18, 1944

STOCKS

	High	Low	Last
Great Northern Paper Co.	33	33	33
Hummel-Ross Fibre Corp.	5¾	5	5½
St. Regis Paper Co.	5¼	4¾	4⅞
St. Regis Paper Co., pf.	154	153	153
Taggart Corp.	5¼	5¼	5¼

BONDS

American Writing Paper Co. 6s '61	100	100	100

St. Regis Plans to Recapitalize

At the annual meeting of the St. Regis Paper Company on March 14 there were presented for action by the stockholders a number of proposals which are of unusual importance. In annual reports to the stockholders for previous years reference has been made to the desirability of presenting to the stockholders a plan to discharge the arrears of dividends, amounting to $70 a share, on the outstanding shares of the company's 7% cumulative preferred stock. Certain adverse conditions affecting the company, such as the shut-down of the Tacoma pulp mill by government order, however, have not made it possible, in the judgment of the directors, to formulate a definite plan for submission to the stockholders.

The plan provides, among other things, for the creation of a new 5% cumulative prior preferred stock, to consist of 200,000 authorized shares of the par value of $50 per share, and the change and reclassification of the presently outstanding shares of the 7% cumulative preferred stock into shares of second preferred stock of the par value of $100 each.

Initially, 154,919 shares of the new 5% cumulative prior preferred stock will be authorized for issuance in exchange for outstanding shares of the present 7% cumulative preferred stock (or for the present stock as reclassified into second preferred stock) with all rights appertaining to the outstanding shares, including the release and discharge of all claims to dividends now accrued and in arrears thereon, on the basis of three and six-tenths (3.6) shares of the new 5% cumulative prior preferred stock for each share of the present 7% cumulative preferred stock now outstanding.

The new 5% cumulative prior preferred stock will be entitled to preferences over the shares of the second preferred stock.

Approval of the plan of recapitalization is believed to be in the best interests of the holders of the present preferred stock and of the common stock. In the event that the stockholders approve the plan, shortly thereafter the company will issue to the holders of the 7% cumulative preferred stock now outstanding an offer to exchange their shares on the basis stated above. If a sufficient number of such shareholders accept the offer of exchange under the plan, the board of directors will declare the plan operative and the further proceedings will then be taken to carry out the plan.

Other matters to be considered at the annual meeting, in addition to the election of directors, include the following:

It is proposed to authorize the extension of the corporate existence so that the duration of the company shall be perpetual. Other proposals to be considered at the annual meeting include authorizations to take statutory proceedings to provide that the number of directors of the company shall be not less than 9 nor more than 17; that directors need not be stockholders of the company; and that the principal office of the company shall be changed from Watertown to New York City. It also proposed to amend the by-laws so that the future annual meetings of the stockholders may be held at the Company's office in New York City.

There will also be submitted for the approval of stockholders a plan for the issue and sale of 250,000 additional shares of common stock, now authorized but unissued, to employees of the company or its subsidiaries, as may be determined by the directors, at the price of $5 per share, which is the par value of the common stock. It is the belief of the management that the establishment of such a plan will promote the interest of the company and its stockholders by providing a means whereby employees holding important positions may be induced to acquire an ownership interest in the company.

The management proposes to vote the proxies received for the election of a Board of 14 directors to consist of the following:

J. O. Bulkley, T. H. Cosford, W. DeLong, W. K. Dick, W. J. Dixon, R. K. Ferguson, M. F. Ford, H. S. Lewis, H. E. Machold, C. R. Mahaney, R. B. Maltby, C. B. Martin, J. A. Quinlan, and W. A. Versfelt.

Hinde-Dauch Nets $2.27

The Hinde & Dauch Paper Company and subsidiaries for the year ended December 31 reports sales of $24,848,076, compared with $20,695,479 previous year; net income $996,530 after taxes and charges, equal after preferred dividends to $2.27 a share on 360,250 common shares; previous year $1,003,036 and $2.29 a share. Cash and Government securities $2,491,956, compared with $1,665,739; inventories $2,229,897, compared with $2,709,810; current liabilities $1,425,777 compared with $1,276,063.

National Container Buys Bedford

The National Container Corporation reports that sales in 1943 reached a new high mark in the company's history. Net sales for the year ending December 31, 1942 were $8,914,027 as compared with $12,968,778 for the year ending December 31, 1943, being an increase of 23%. Net profits after all charges for the year ending December 31, 1942 amounted to $654,833 as compared with $816,997 for the year ending December 31, 1943, an increase of 24%. The net per share on 330,482 shares of common was $1.98 for 1942 as compared with $2.47 for 1943.

Renegotiation of war contracts has been settled for 1942 on the basis of a refund to the Government of $28,450 and a reserve of $75,000 has been deducted from 1943 earnings to cover renegotiation for that year.

During the year 1943 company's funded debt was reduced by more than $400,000 and consolidated net working capital was increased by over $300,000.

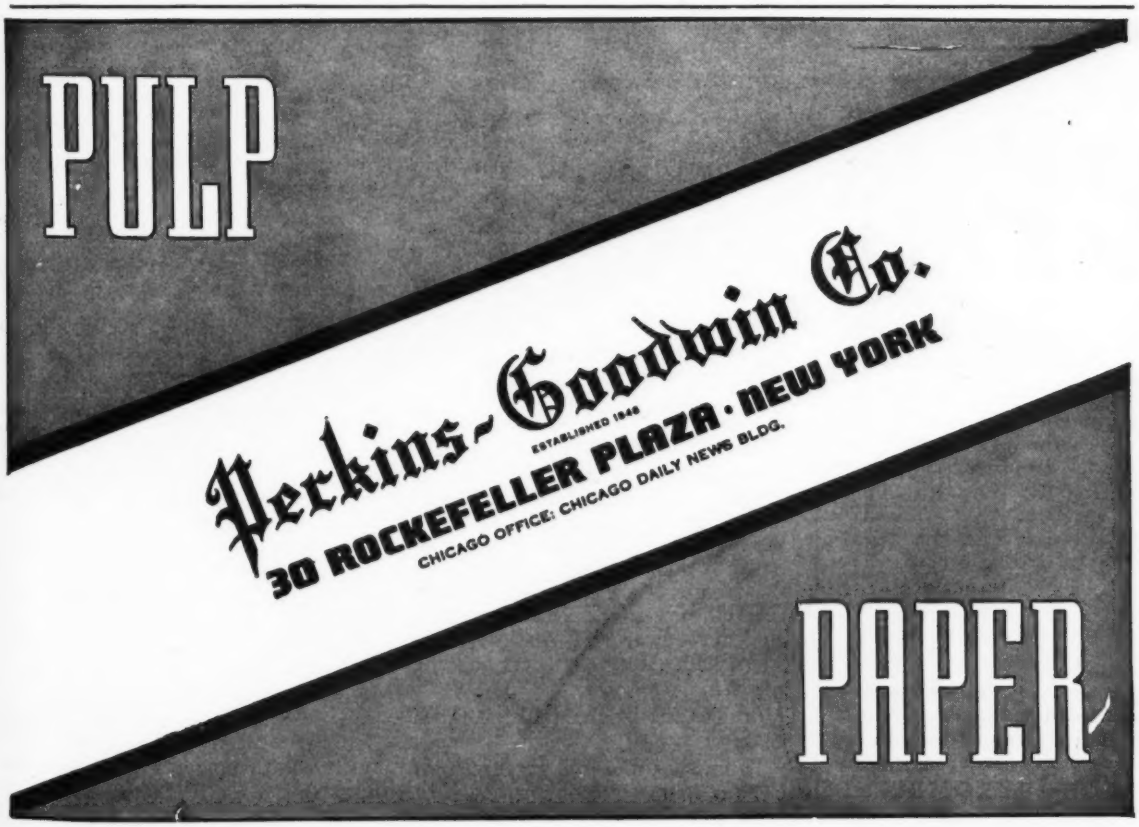
The company has recently purchased the Bedford Pulp and Paper Company of Virginia and contemplates the issuance and sale of $4,500,000 5% 15 year debentures for purposes of paying for the new acquisition, as well as refunding present debt and furnishing additional working capital for the company's expended operations.

Fraser Companies Net $495,179

The Fraser Companies, Ltd. (Canada)—for 1943 reports net profit, after $2,770,000 Dominion income and excess profits taxes, including refundable portion, which were charged to surplus, was $495,179. Current assets on December 31 were $11,600,208 and current liabilities, $5,921,321. Steps are being taken for dissolution of voting trust before annual meeting of 1944.

Masonite Profits Off

The Masonite Corporation for the quarter to February 29 reports a net profit of $227,164 or 31 cents a common share, against $256,845, or 36 cents a share, for quarter to February 28, 1943. Six months to February 29: Net profit, $509,719, or 72 cents a common share, against $603,430 earned in similar period of previous year.



Boston Paper Merchants Meet

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., March 20, 1944—Matthew O. Byrne, treasurer of Whitney Brothers, Inc., was elected president of the Boston Paper Trade Association at the 58th annual meeting of the organization, held at the Algonquin Club, Wednesday evening, March 15. John D. Zink was elected first vice-president; James Richard Carter, now in the service, in the Army Air Corps, was re-elected second vice-president; T. Charles Casey, treasurer, and Frank B. Cummings, secretary. William C. Ross was elected auditor.

The following committees were chosen:

Executive committee — Norman Harrower, Charles W. Fields, and W. Edwin Porter, Jr.

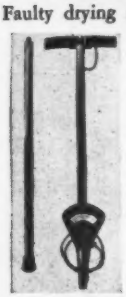
Membership committee — W. N. Stetson, Jr., chairman, Charles A. Esty, John A. Andrew, Willard H. Loud, and Hubert W. Lockhart.

Arbitration committee—George W. Wheelwright, Arthur L. Hobson, Charles W. Shaw, Harry C. Thayer, and Albert P. Carter.

CHECK ROLL TEMPERATURES

EASILY . . . ACCURATELY

Faulty drying roll temperatures that cause many headaches in papermaking can be located quickly and easily with a Cambridge Surface Pyrometer. Use of this portable instrument for periodic checking of roll surfaces permits increased protection with complete safety . . . lower steam cost . . . less broke . . . better paper.



CAMBRIDGE INSTRUMENT CO., INC.
3732 Grand Central Terminal, New York, N. Y.

CAMBRIDGE
SURFACE PYROMETERS

The nominating committee was composed of Charles S. Proctor, F. Bendel Tracy, M. L. Madden, and J. W. Vivian.

Following the reception and before the dinner, the Star Spangled Banner was sung.

President Irving N. Esleeck was in the chair, with 157 members and guests present.

In the business meeting, W. Edwin Porter, Jr., acted as secretary in the absence of Secretary Frank B. Cummings, who was unable to attend.

It was voted to send a letter regretting that he was unable to attend with wishes for a speedy recovery from his illness to Colonel Charles S. Proctor, who had not missed a meeting in 40 years.

The report of the membership committee showed the total number of members 304.

Names of those who had died during the year were read as follows, and all stood in silent tribute to their memory: John E. A. Hussey and Winthrop L. Carter.

Elected to limited membership were: F. Henry Savage, International Paper Company, New York City; W. O. Semple, New England representative, Sutherland Paper Company, Kalamazoo, Mich.; Herbert C. Fowler, International Paper Company, Boston; C. Edward Rice, and Ralph R. White, Sealright Paper Company, Fulton, N. Y. Elected to regular membership were Harold A. Fernald, division manager, Robert Gair, Inc., Haverhill, Mass.; Arthur V. Howland, Tileston & Hollingsworth Company, Boston, Mass., and R. V. W. Ewing, Holyoke Card & Paper Company, Holyoke, Mass.

A letter from the War Production Board was read by the acting secretary in regard to critical situation of waste paper.

Following the business meeting, Sydney R. Montague, ex-Canadian mountie, gave a highly interesting, graphic address on "Arctic Frontiers." During his talk he said that the mountie is absolutely uncontaminated by politics and that the girls on the frontier were the opposite from the Hollywood type. Other topics included the war and Alaskan highways, with Army engineers building roads.

Besides Alaska, the speaker touched on Siberia.

Discussing the oil resources of Canada in the question period, Mr. Montague intimated there was enough oil there to supply the whole world.

Recruiting Women Workers

With the acute need for more workers, industry has turned to heretofore little-tapped sources of labor—housewives, school girls, those who have not worked in factories or business, handicapped workers and part-time employees. To assist those executives faced with the problem of recruiting and adjusting the applicants to their new work, the Policyholders Service Bureau of the Metropolitan Life Insurance Company has prepared two reports entitled, "Recruiting Women Workers" and "The Employee Counselor in Industry."

The first study discusses the various sources of labor to be tapped and the practices followed by leading industrial companies to attract women workers. In addition to setting up convenient and attractive employment offices, newspaper advertising, supplemented by newspaper articles, movies, billboards and store window displays, has been used effectively to recruit vitally needed workers. The present employees of a company were found to be an excellent source of new workers. Other companies found that their greatest help in securing new recruits comes from the local high schools, business schools and women's clubs.

The industrial counselor plan is not new but the sudden increase in personnel, making it necessary to convert housewives, clerks, salesmen, farmers, beauty parlor workers and others into production workers, accounts for the increased use of the employee counselor. The Bureau's report, "The Employee Counselor in Industry" outlines the qualifications of a counselor as stated by several companies and discusses the general and special services rendered. The study also treats of the methods used to introduce the counselor plan to the supervisory force, counselor's records, training the counselor, and evaluating the counselor plan.

Copies of either or both of these reports will be sent to executives who address the Bureau on their business stationery. Address: Policyholders Service Bureau, Metropolitan Life Insurance Company, 1 Madison avenue, New York 10, N. Y.

R. F. Herrlinger Goes With WPB

Roth F. Herrlinger, who has accepted a position as deputy director of converted paper products with the paper section of the War Production Board, has resigned as a member of the board of directors and as president of the Gummed Industries Association, 19 W. 44th street, New York.

J. A. Shartle of the Brown-Bridge Mills, Inc. has been chosen to replace Mr. Herrlinger as a member of the board of directors.

John MacLaurin, president of the McLaurin-Jones Company, who has been vice president of the Gummed Industries Association, has been chosen as president to succeed Mr. Herrlinger and J. A. Shartle has been chosen to succeed Mr. McLaurin as vice president of the association.

These elections are retroactive to March 9, 1944, the date of Mr. Herrlinger's acceptance of the WPB assignment.

C. A. Goodrich Heads Case Bros.

MANCHESTER, Conn., March 20, 1944—At a meeting of the directors of Case Brothers, Inc., C. A. Goodrich was elected president and treasurer of the company to succeed the late Lawrence W. Case. Mr. Goodrich has been general manager of the company, which operates mills at Highland Park and Woodland.

He has devoted his life's work to the paper industry and is particularly well fitted to carry on the business of Case Brothers. He came to Case Bros. as a salesman in 1933 and was made sales manager of the company the same year and advanced to general manager in 1937.

Case Bros. mills are engaged in 85 per cent war work and have been for some time. The company is one of the oldest industries in Manchester. Mr. Goodrich said this morning that there will be no particular change in management and that customs and traditions that were established by the Case family through the years will continue.

Newspapers Use Less Newsprint

Daily newspapers reporting to the American Newspaper Publishers Association consumed 182,487 tons of newsprint paper in February 1944 compared with 208,143 tons in 1943 and 219,362 tons in 1941. This was a decrease in February 1944 under February 1943 of 12.3% and a decrease under February 1941 of 16.8%.

The total estimated newsprint consumption in the United States for February 1944 was 243,316 tons which includes all kinds of uses of newsprint paper. For the first two months of 1944, it was estimated to be 502,903 tons.

During the first two months of 1944 the reporting newspapers used 377,177 tons of newsprint, a decrease of 13.3% under the first two months of 1943, and a decrease of 16.0% under the first two months of 1941.

The stocks of newsprint paper on hand with newspapers reporting to the ANPA was 54 days' supply at the end of February 1944.

We're in it for the duration

SINCE 1828

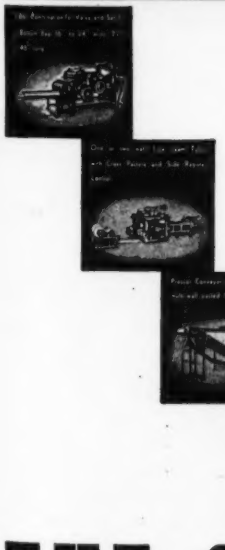
Continuously We Have Served The Paper Industry.

Since War II was declared we have used all our manufacturing facilities, and done our small part to help build our fighting machine for war.

At the same time we have been planning for peacetime equipment and improvements NOW!

We have some of our machines available to produce new machinery for civilian products.

Paper Machines
Paper Bag Machines **Paper Cutters**
Can be built with a PDIA Priority rating.



THE SMITH & WINCHESTER
MANUFACTURING COMPANY
PLANT AND OFFICES AT SOUTH WINDHAM, CONNECTICUT

PAPER
TRADE JOURNAL
Title Reg. U. S. Pat. Off.
Henry J. Berger
EDITOR

No. 118 March 23, 1944 No. 12

COMING EVENTS IN PAPER INDUSTRY

New England Section. Technical Association of the Pulp and Paper Industry—Third Friday of each month at the Roger Smith Hotel, Holyoke, Mass.

Delaware Valley Section. Technical Association of the Pulp and Paper Industry—First Friday of each month at the Engineers Club, Philadelphia, Pa.

Lake States Section. Technical Association of the Pulp and Paper Industry—Second Tuesday of each month at the Conway Hotel, Appleton, Wis.

Kalamazoo Valley Section. Technical Association of the Pulp and Paper Industry—First Thursday of each month at the Park, American Hotel, Kalamazoo, Mich.

Chicago Professional Paper Group—First Monday of each month except July and August at Chicago, Ill.

PRICES AND GOODS

As the progress of the war continues to develop favorably for an Allied victory, more attention is being given to the many problems that must be met to provide for the continuance of a high American standard of living. Some of these difficulties caused by a wartime economy must be readjusted at the present time and not deferred until the termination of the war. A serious and realistic effort to readjust the price structure controlled by the Office of Price Administration should be made. The current price schedule is imperfect and a more equitable readjustment of prices to include legitimate higher costs appears most essential.

In commenting on price control renewal, the March 11 issue of the *Washington Review,* published by the Chamber of Commerce of the United States states in part: "The usual, preliminary jockeying for position is going on at a merry pace; as yet, the public manifestations have been strongly political in character. Behind the scenes, however, serious study is being given to procedure both by the Administration and those who seek improvements in the OPA law. It appears now that hearings will start first on the House side of the Capitol. They probably will be quite lengthy, although the necessity for getting a bill through both the House and Senate and before President Roosevelt by June 30 wil be paramount in the minds of all. . . . The recurrent disagreement between Congress and the President over subsidies will be the major stumbling block to OPA renewal. In addition, there are other equally-fundamental propositions that will have to be decided. For example there is room for further safeguards against effecting changes in established business practices for the sake of reform. As the time approaches for the OPA to give an accounting of its stewardship, Congress appears to be in a somewhat more friendly mood than even one year ago. Critics of the agency could take the position that it is attempting to modify a number of its policies and practices in an effort to improve its standing. OPA has to run not only the legislative gauntlet, but it must almost simultaneously justify its request for millions of dollars in appropriations before other Capitol committees."

Noting that reconversion is proceeding most slowly, the article says in part: "A drumfire of demands continues for a little more emphasis on production of civilian goods. Yet the War Production Board can go only as far as the war chieftains will permit; and those leaders certainly are the court of last resort at present. There is a trickle of basic materials to civilian goods manufacturers, but no more. The Truman investigating committee in the Senate for instance, in another of its overall reports, calls for an increase in civilian production but cautions that the transition should occur only if, as and when the war effort permits. The committee sharply focuses attention on the necessity for prompt, orderly disposal of surplus property, since the major production battles already have been won. It advances the argument that diversion of materials into the civilian economy would be a counter-inflationary move by serving as an escape valve for the tremendous pent-up buying power in the hands of the public. Over-all, the committee's report lays heavy emphasis on the necessity for the quickest possible return to free, competitive enterprise as the war programs decline in importance."

Declaring that reports on the nation's productive effort for war no longer are vitally important, except in a few of the most currently-needed categories, the *Review* goes on to say that, "Both the high productive rate generally and the spotty cutbacks from city to city have produced some unusual manpower situations. The Office of War Information has made a survey which it says shows that areas of heavy industrial migration now report that workers are beginning to go home. Statistics for a recent month show that for every 1,000 workers employed, 43 quit, 5 left to enter the armed services, 6 were discharged, 51 were hired and 9 were laid off. . . . Basic war industries such as aircraft, transportation and coal mining continue to suffer from critical labor shortages. A further restriction of production in such industries as paper and pulp, leather and shoes, tires, textiles and lumber is threatened because of a lack of workers."

Taxes must, of course, continue as one of the most complex and difficult problems to even partially solve. Pointing out that tax reform is generally agreed to be an essential element of consideration in any post-war plan, Godfrey N. Nelson, secretary of The New York Times Company, in the March 19 issue of *The New York Times,* states in part: "The most useful technical study that could now be undertaken would

be an inquiry into the amount of taxation drag that business can withstand and overcome in the transition period. Under the capitalistic system, in a normal market, the natural incentive to do business for profit is ever present. The transcendent question to be answered now, therefore, is as to how much tax resistance, with which the vehicle is already loaded, can be overcome in the early stages of the transition from an artificial to a natural business economy. . . It is suggested that the Congress give serious consideration to the advisability of enacting a prolonged suspension of Section 102 of the code, and to the repeal of the capital gains tax, both effective upon the termination of the war."

Urges Regular Delivery of Newsboard

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., March 22, 1944—Directives have been issued to specific mills to assure regular deliveries of newsboard to manufacturers of paper liners used in closures for glass containers, the WPB Paperboard Division announced today. This action has been taken to provide sufficient supplies of newsboard to meet liner requirements.

About 70% or 9,000,000,000 (billion) of all glass containers are sealed with caps having paper liners. Newsboard, a grade of paperboard made largely from wastepaper, pulpboard, or kraft is used for the liners.

The need for keeping the glass container industry supplied regularly and adequately with newsboard, pulpboard and kraft was pointed out in a resolution submitted recently by the Glass Container Industry Advisory Committee.

Production Ratio Report*

(Production as per cent of six-day capacity)

COMPARATIVE WEEKLY SUMMARIES

Current Weeks—1944		Corresponding Weeks—1943	
February 5	90.9	February 6	87.2
February 12	89.6	February 13	88.4
February 19	91.2	February 20	89.0
February 26	89.2	February 27	91.0
March 4	88.7	March 6	89.7
March 11	*89.1*	March 13	89.8

COMPARATIVE MONTHLY SUMMARIES

Year	Jan.	Feb	Mar.	Apr.	May	June	July
1943	87.2	88.9	89.5	88.7	91.4	84.8	84.3
1944	90.1	*90.6*	...	...	...	...	...

Year	Aug.	Sept.	Oct.	Nov.	Dec.	Year Avg.
1943	91.0	88.3	89.6	89.6	82.0	87.8

COMPARATIVE YEARLY SUMMARIES

	1937	1938	1939	1940	1941	1942	1943	1944
Year to Date..	89.2	66.4	78.9	86.6	88.1	103.8	88.4	*90.1*
Year Average .	79.8	71.5	83.4	85.6	97.4	90.4	87.8	...

* Based on tonnage reported to American Paper and Pulp Association. Does not include mills reporting to National Paperboard Association, except in isolated cases where both paper and paperboard are produced and separate tonnage figures are not readily available. Does not include mills producing newsprint exclusively.

PAPERBOARD OPERATING RATIOS†

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year Avg.
1938	56	63	63	60	60	59	59	69	70	73	67	61	64
1939	65	73	76	74	69	73	68	77	82	91	88	77	77
1940	78	75	74	76	82	85	77	79	78	85	82	77	78
1941	81	88	89	89	91	94	92	98	95	99	98	90	92
1942	102	101	101	95	82	72	68	75	76	81	82	77	84
1943	86	88	94	94	96	94	89	96	94	94	93	87	93
1944	90	*96*	..	..	..	..	..	..	..	..	..	..	..

Week ending Feb. 5, 1944—97
Week ending Feb. 12, 1944—97
Week ending Feb. 19, 1944—96
Week ending Feb. 26, 1944—93
Week ending Mar. 4, 1944—95
Week ending Mar. 11, 1944—*95*

† Per cents of operation based on "Inch-Hours" reported to the National Paperboard Assn.

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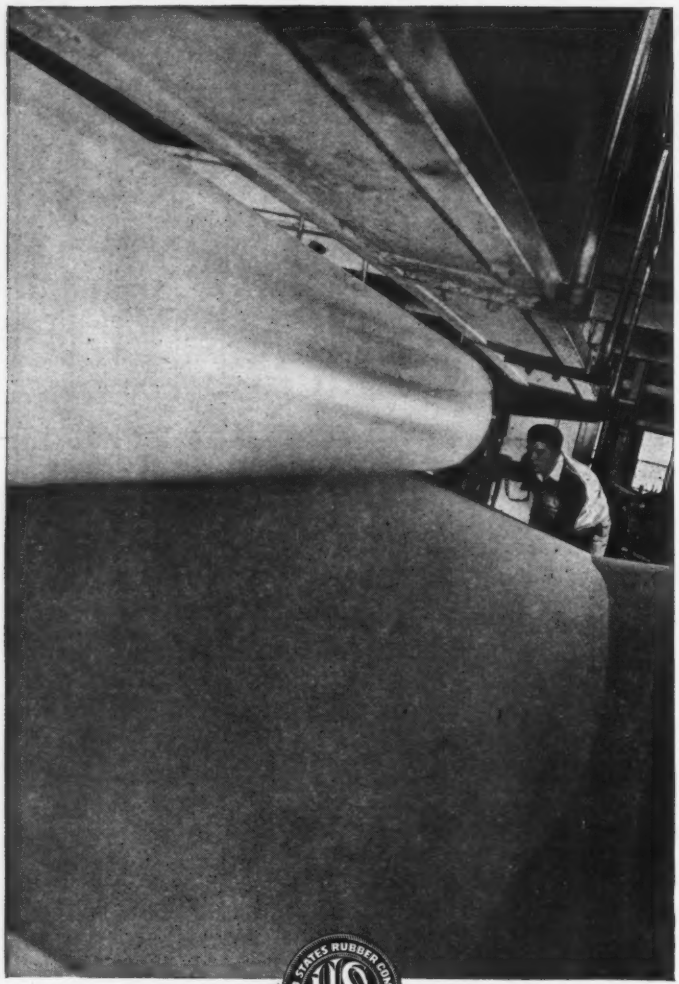

Synthetic Rubber PAPER MILL ROLLS

Now that synthetic rubber is a "must," maybe you've been wondering how it will work out in paper rolls. Here's our answer:

U. S. Synthetic Rubber Roll Coverings have core adhesion equivalent to previous standards for natural rubber, excellent uniformity of density, polished surfaces free from imperfections, low drift with resultant freedom from corrugation.

U. S. Rubber Company chemists and engineers have been working with synthetic rubber for more than twenty-five years. They are thoroughly familiar with all five basic types, know the characteristics and properties of each. They have drawn upon this backlog of knowledge and experience to engineer and compound paper rolls of synthetic rubber.

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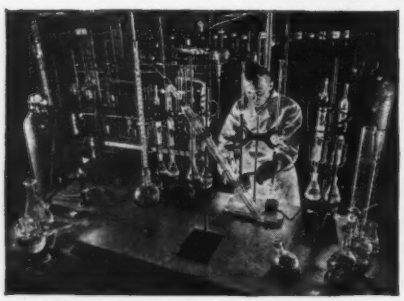
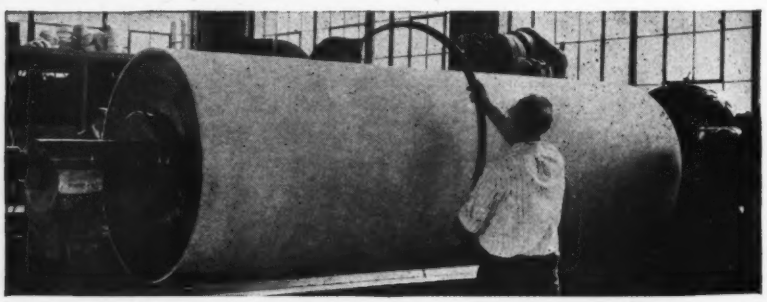


COMPOUNDING SKILL is a prime requisite in producing good paper mill rolls. U. S. Synthetic Rubber Rolls are compounded by men who know the characteristics of each type of synthetic rubber, and how to compound the proper type to handle a specific roll job.



MANUFACTURING SKILL. Calibration of a finished roll is only one step in the careful inspection, and careful manufacture of U. S. Paper Mill Rolls. It is your assurance that the crown is accurately determined and that finished dimensions are as specified. Remember, too, that the men who compound the synthetic rubber for the roll covering have had long experience in working with synthetic rubber and that each U. S. Paper Mill Roll is staff-engineered.

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Edited by R. G. Macdonald, Secretary

The Kraft Pulping of Southern Tannin-Rich Woods*

By Loren V. Forman[1]

Abstract

A large supply of tannins for the leather industry is obtained by extraction of tannin-bearing wood prior to manufacture of papermaking pulp. Many species growing in Southeastern United States are rich in tannins and may be potential sources of raw material for this dual purpose.

An investigation of the kraft pulping characteristics of several of these species has been made. The specimens were classified in three groups: those containing tannin in the wood and bark, those with tannin only in the bark, and those having no tannins.

Some of the species which are known to have tannins suitable for leather processing in quantities adequate to permit commercial recovery were found to produce pulp having strength properties similar to normal hardwood kraft pulps.

The need for a new domestic source of tanning materials has been increasing as the existing supply of chestnut has gradually diminished. This need has become more critical during the war because of the increased demands for tanning materials and to the uncertainty or failure of foreign sources of tanning materials.

In recognition of this need, the Rockefeller Foundation has sponsored an extensive factual survey of all the available tanning materials in the Southeastern United States. This survey is being carried out by Dr. Alfred Russell of the Department of Chemistry at the University of North Carolina, Chapel Hill, North Carolina. Russell *(1)* has collected several hundred specimens which are being identified botanically and examined for tannin content. Where tannins are present, extracts are being prepared and used in the experimental manufacture of leather from pickled calf stock. Further tests are carried out with the more promising materials.

In the case of chestnut, the feasibility and economic advantages of using the extracted wood for pulp production have been demonstrated. With the present shortage of pulpwood in the United States, it would be particularly interesting if a new domestic source of tannin should prove to be suitable also as a raw material for pulp production. Of the several hundred species collected by Russell, a selected group are being examined for their pulping characteristics at The Institute of Paper Chemistry. Although most of the samples in this group are of particular interest because of their tannin content, a few containing no tannin have also been included. The purpose of this paper is to summarize the sulphate pulping characteristics of the specimens examined experimentally thus far. Additional data will be reported as the work progresses.

Woods Studied

The species studied may be separated into three classes—namely, those which contain (1) no tannins in either bark or wood, (2) tannin in the bark only, and (3) tannin in the bark and wood. Classes 1 and 2 did not require extraction before cooking. The species of Class 3 were extracted for their tannin content prior to cooking by a technique approximating that normally applied to chestnut.

This report presents the pulping results on 22 of the species submitted by Russell. Of these, six were found to contain no tannins in the bark or the wood, eight contained tannins in the bark alone, and eight contained tannins in both bark and wood. The tannin extracts of the tannin-bearing species have yielded good specimens of leather and may be considered as possible sources for tannins to supplement our present supplies.

The following species were evaluated for pulping characteristics:

1. *Cerothamus ceriferus* (L.) Small [syn. *Myrica cerifera* L.], wax myrtle, scrub myrtle, bay berry.
2. *Sideroxylon foetidissimum* Jacq., mastic, wild olive.
3. *Acacia auricularis*, bullhorn acacia.
4. *Nectandra coriacea* (Sw.) Griseb., lancewood.
5. *Casuarina equisetifolia* Forst., Australian pine, beefwood, horsetail tree, she oak, whistling pine, Polynesian ironwood.
6. *Acer rubrum* var. *trilens*, Carolina red maple.
7. *Coccolobis laurifolia* Jacq., [syn. *Coccolobis floridana* Meisn.], pigeon plum.
8. *Conocarpus erecta* L., buttonwood, zaragoza mangrove.
9. *Eugenia confusa* DC. [syn. *Eugenia garberi* Sarg.], snakewood, ironwood.
10. *Coccolobis uvifera* L. Jacq., sea grape, grape tree, platter leaf.
11. *Laguncularia racemosa* Gaertn. f., white mangrove, white buttonwood.
12. *Eugenia axilloris* (Sw.) Willd., white stopper.
13. *Annona glabra* L., pond apple, custard apple, alligator apple.
14. *Avicennia nitida* Jacq., black mangrove.
15. *Elaphrium simaruba* (L.) Rose, gumbo limbo.
16. *Exothea paniculata* (Juss.) Radlk., inkwood, ironwood, butterbough.
17. *Eugenia rhombea* (Berg.) Urban, red stopper.
18. *Drypetes diversifolia* Krug and Urban, whitewood.
19. *Ichyomethia piscipula* (L.) A. Hitch., Jamaica dogwood.
20. *Guaiacum sanctum* L., lignum vitae.
21. *Lysiloma bahamensis* Benth., wild tamarind.
22. *Gymnanthes lucida* (Sw.), crabwood.

* Presented at the Annual Meeting of the Technical Association of the Pulp and Paper Industry, Hotel Commodore, New York, N. Y., Feb. 14-17, 1944.

[1] Member TAPPI; Research Associate, The Institute of Paper Chemistry, Appleton, Wis.

The moisture content of most of these specimens as received was very low, probably because of the prolonged storage after barking. Some of the samples were crooked sticks which averaged less than 2 inches in diameter. The density of many of the species was exceedingly high. Whether these specimens were representative of normal growth has not been determined. For this reason, no data will be given on the physical characteristics of the wood. It may be desirable at a later time to make a critical study of the more favorable species with fresh wood samples.

Pulping and Testing Conditions

A semicommercial chipper set to produce ¾-inch chips from normal pulpwood was used in preparing chips from each species. The chips were screened on a 4-mesh screen and hand sorted to remove oversize splinters. The chips were sampled at once for moisture content determination, and divided into individual digester charges.

The quality of the chips produced from a majority of the species was very poor. The excessive amount of sawdust, the oversize splinters, and the nonuniform chip length may have been caused by the low moisture content, as well as by the high density and hardness, of the wood.

Both extraction and pulping were performed in a stainless-steel vertical experimental digester equipped for indirect steam heating and forced circulation. For extraction, the chips were placed in the digester and covered with distilled water. The temperature was raised to 98° C. and the hot water was circulated through the digester for 3.5 hours. After this, the liquor was drained off and another charge of distilled water was added. The extraction was continued until four cycles were completed. After the leached chips were removed from the digester, their moisture content was determined before the sulphate cook was performed. The species containing no tannin in the wood were not leached before cooking.

The cooking conditions for all species were as follows:

Total active chemical (as NaOH), based on moisture-free wood, %	24.0
Sulphidity, %	33.3
Water ratio, ml. water per g. moisture-free wood	5.0
Maximum temperature, ° C.	174
Time to maximum temperature, hr.	1.5
Time at maximum temperature, hr.	3.5

At the end of the cook the digester pressure was rapidly relieved to 50 p.s.i. before blowing. The pulp was washed in the blow pit with warm water and screened on a 0.010-inch cut diaphragm screen.

Permanganate members were determined on the screened pulp according to TAPPI Standard T

TABLE I. PERMANGANATE NUMBER AND YIELD DATA

Cook Number	23	24	27	28	29	31	8	4	19	22	5	15	3	20	21	26	25	18	16	30	17	14
Wood	Black Mangrove	Gumbo Limbo	White-wood	Jamaica Dogwood	Lignum Vitae	Crabwood	Lance-wood	Mastic	Carolina Red Maple	Pond Apple	Acacia	Australian Pine	Wax Myrtle	Pigeon Plum	White Stopper	Red Stopper	Inkwood	White Mangrove	Snake-wood	Wild Tamarind	Sea Grape	Button-wood
Tannin content of wood, %	...	...	...	...	...	Trace	...	...	...	...	...	...	...	...	4.6	5.2	5.2	5.4	6.0	12.0	6.1	9.0
Tannin content of bark, %	...	...	...	...	Trace	Trace	4.0	7.0	7.0	7.5	10.0	15.5	16.0	22.0	9.9	10.1	11.0	16.0	20.0	15.6	25.5	23.0
Moisture as received, %	11.9	11.2	10.2	9.4	11.4	10.0	8.4	20.5	8.1	10.8	13.0	9.6	6.0	10.6	11.4	9.4	39.3	9.8	8.8	14.6	9.8	14.0
Unscreened yield, %	36.2	44.3	44.0	41.5	38.7	42.1	38.4	47.9	49.9	40.9	56.4	47.4	47.1	36.6	41.9	37.4	55.4	39.4	36.6	50.7	39.1	42.8
Screened yield, %	34.5	42.4	42.5	39.6	35.5	41.4	37.9	47.4	49.0	40.5	55.4	45.1	33.1	35.5	41.0	36.8	49.5	37.3	36.4	49.7	37.6	40.6
Screenings, %	4.9	4.3	3.3	4.4	8.3	1.7	1.0	1.0	1.5	1.1	1.7	4.8	29.7	3.0	2.0	1.5	10.7	5.3	0.7	2.1	3.8	5.0
Permanganate number	13.9	20.5	34.0	24.0	15.3	34.4	17.9	16.9	10.4	16.4	12.1	11.5	24.8	17.1	16.6	17.9	17.3	35.3	19.1	24.0	15.1	34.7

TABLE II. PHYSICAL CHARACTERISTICS

Ream Basis—Pounds, 25 x 40—500

Cook Number		23	24	27	28	29	31	8	4	19	22	5	15	3	20	21	26	25	18	16	30	17	14
Wood	Beating Time, Min.	Black Mangrove	Gumbo Limbo	White-wood	Jamaica Dogwood	Lignum Vitae	Crabwood	Lance-wood	Mastic	Carolina Red Maple	Pond Apple	Acacia	Australian Pine	Wax Myrtle	Pigeon Plum	White Stopper	Red Stopper	Inkwood	White Mangrove	Snake-wood	Wild Tamarind	Sea Grape	Button-wood
Schopper freeness, ml.	5	810	770	840	800	770	780	850	850	830	805	805	845	770	835	800	800	780	795	830	820	775	815
	20	620	610	540	610	670	600	730	650	730	660	690	775	610	650	550	650	605	625	695	720	625	670
	35	425	390	240	440	540	400	500	355	610	470	595	650	385	410	310	430	330	415	460	540	470	490
	50	260	230	150	170	440	230	255	205	460	250	475	460	195	190	160	260	150	240	250	320	310	280
	65	140	140	100	110	280	140	...	...	270	145	315	265	...	...	100	160	90	...	...	190	...	...
Apparent density	5	11.0	12.0	8.5	9.5	11.0	9.5	10.0	9.0	11.0	10.0	11.5	8.5	12.0	10.0	9.5	9.0	11.5	11.0	9.0	10.5	10.0	9.5
	20	12.5	13.5	10.0	11.0	11.5	16.5	12.0	10.0	13.0	10.5	13.0	10.0	13.5	10.5	11.5	11.0	13.0	12.5	10.5	12.0	11.0	10.5
	35	14.0	14.5	11.5	12.0	13.0	11.5	13.5	11.0	14.5	11.0	14.0	11.5	14.5	12.0	13.5	12.0	14.0	13.5	12.0	13.0	11.5	11.5
	50	15.0	16.0	...	13.0	13.5	12.5	15.0	12.0	16.0	11.5	15.0	12.5	15.5	13.0	...	13.5	15.5	14.5	13.0	14.0	12.5	12.0
	65	...	...	...	...	14.5	...	...	...	17.0	...	15.5	14.0	...	...	...	...	...	...	...	...	...	...
Bursting strength, points per 100 lbs.	5	30	45	19	34	35	24	27	15	41	53	54	21	44	25	40	29	43	33	30	33	29	28
	20	50	64	43	66	55	42	58	32	78	77	84	47	69	43	77	52	62	61	63	71	42	50
	35	67	72	53	73	75	57	88	41	105	87	96	73	87	59	95	65	105	82	91	88	53	64
	50	78	74	..	72	87	67	97	43	118	88	104	94	91	72	..	72	113	89	107	93	66	73
	65	..	..	..	..	97	..	..	..	120	..	113	105	..	..	..	..	..	..	..	..	..	..
Tear factor	5	0.58	0.66	0.82	0.81	0.54	0.43	0.61	0.44	0.63	1.00	0.73	0.59	0.67	0.45	1.05	0.69	0.71	0.64	0.77	0.65	0.47	0.52
	20	0.77	0.56	1.06	0.87	0.67	0.57	1.01	0.65	0.98	1.02	0.77	0.96	0.81	0.61	1.21	0.87	0.86	0.83	1.05	0.88	0.69	0.84
	35	0.83	0.48	0.95	0.71	0.82	0.64	1.09	0.73	0.98	1.00	0.79	1.09	0.71	0.67	1.09	0.85	0.79	0.91	1.08	0.80	0.73	0.90
	50	0.71	0.43	...	0.59	0.90	0.62	0.96	0.62	0.89	0.84	0.77	1.08	0.66	0.64	...	0.74	0.73	0.88	1.08	0.54	0.80	0.87
	65	...	...	...	...	0.84	...	...	...	0.71	...	0.75	1.04	...	...	...	...	...	...	...	...	...	...
Tensile, pounds per inch	5	13.0	16.4	8.5	12.2	12.5	10.5	12.2	7.3	17.9	16.3	18.8	10.1	15.5	12.0	15.3	11.8	15.4	13.4	12.0	11.8	10.8	10.5
	20	18.3	21.2	15.4	19.9	16.4	15.3	19.8	11.8	25.4	21.4	25.5	16.6	21.8	17.4	23.4	17.6	24.2	19.3	19.4	20.5	14.5	15.5
	35	22.9	23.7	17.2	22.0	20.0	19.2	24.7	14.5	31.1	23.9	28.7	21.6	26.5	21.6	27.7	20.2	28.0	22.8	24.0	23.8	18.1	18.6
	50	23.8	25.4	...	21.7	22.5	21.8	27.9	15.9	33.8	24.7	30.9	25.4	29.1	24.3	...	21.9	30.6	25.0	25.7	26.1	20.8	20.4
	65	...	...	...	...	25.2	...	...	...	33.6	...	30.8	28.6	...	...	...	...	...	...	...	...	...	...

214 m-42. The yields of pulps were calculated on the following basis:

$$\text{Unscreened yield*, \%} = \frac{\text{Screened pulp + screenings} \times 100}{\text{Chip charge}}$$

$$\text{Screened yield*, \%} = \frac{\text{Screened pulp} \times 100}{\text{Chip charge}}$$

$$\text{Screenings*, \%} = \frac{\text{Screenings} \times 100}{\text{Screened pulp + screenings}}$$

* Based on moisture-free products.

TAPPI Standard T 200 m was used in evaluating the pulps in the 1.5-pound Valley beater.

Results

The yield data and permanganate numbers are given in Table I, together with the tannin and moisture contents. The results of the beater evaluations are summarized in Table II.

As might be expected, the species investigated thus far exhibited a wide range of pulping characteristics. Large variations in pulp yields, permanganate numbers, and screenings were observed. The data presented in Table I show that certain of the woods yielded pulps of rather low permanganate number containing high percentages of screenings, whereas other pulps of very high permanganate number contained but small amounts of screenings. Most of the pulps that were found to be superior in one or more respects were also found to be decidedly inferior in others. It is difficult, for this reason, to single out any wood or group of woods as being the most desirable from the point of view of pulping and papermaking.

From the standpoint of producing a high yield of pulp of low permanganate number and low screenings, probably the most desirable woods are the following: Carolina red maple, mastic, acacia, pond apple, and Australian pine.

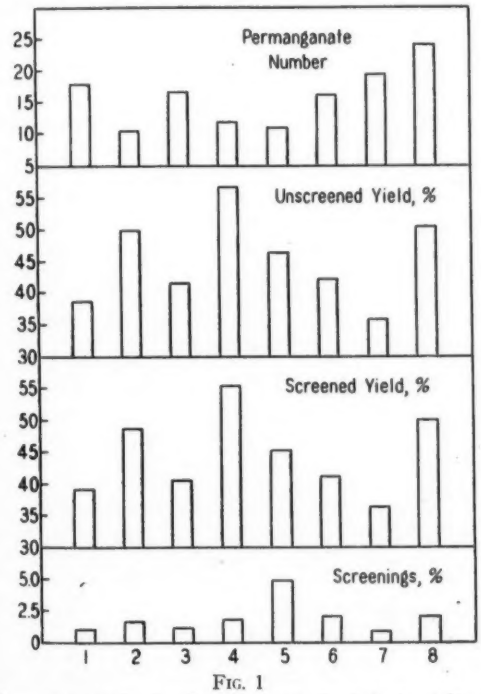

FIG. 1

1. Lancewood; 2. Carolina Red Maple; 3. Pond Apple; 4. Acacia; 5. Australian Pine; 6. White Stopper; 7. Snakewood; 8. Wild Tamarind.

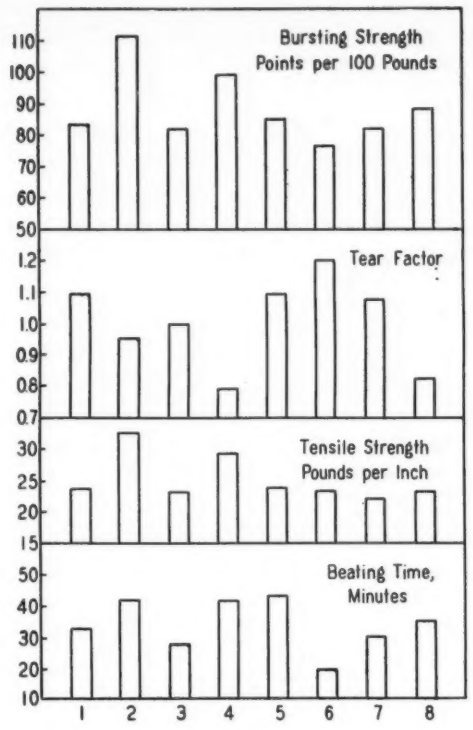

FIG. 2

1. Lancewood; 2. Carolina Red Maple; 3. Pond Apple; 4. Acacia; 5. Australian Pine; 6. White Stopper; 7. Snakewood; 8. Wild Tamarind.

Densities of handsheets made from the pulps of several species were abnormally low, as in the case of whitewood, Australian pine, snakewood, and red stopper. The remaining species covered a range of densities increasing until, as in the case of Carolina red maple, gumbo limbo, wax myrtle, and inkwood, the densities were comparable with those found in normal pulps. There was no definite correlation between strength properties and the pulp density.

Bursting strengths of the pulps examined varied considerably. The very best pulps showed fairly high values, approaching those found in average, normal hardwood pulps. The highest bursting strengths were found in the pulps produced from Carolina red maple, acacia, inkwood, snakewood, and Australian pine.

The tearing strength of all the pulps investigated was inferior to the better southern hardwood kraft pulps, such as gum. The pulps having the best tearing strength values were white stopper, Australian pine, lancewood, snakewood, and pond apple.

Tensile strength properties paralleled quite closely the bursting strength properties in most cases. The best tensile values obtained approached the values expected from a normal commercial hardwood pulp. The highest tensile strength properties were found in the pulps produced from Carolina red maple, acacia, inkwood, wax myrtle, and lancewood.

Conclusions

From an overall consideration of the pulping characteristics of the wood and the physical properties of the resulting pulps, the most promising species appear

to be Carolina red maple, Australian pine, acacia, lancewood, snakewood, white stopper, pond apple, and wild tamarind. The properties of the pulps produced from these species are shown diagrammatically in Figs. 1 and 2.

Lancewood, Carolina red maple, pond apple, acacia, and Australian pine are the most promising of those species which contain tannin only in the bark. The pulp produced from lancewood had good strength properties, although its tannin content may be too low for commercial extraction. Pulps from Carolina red maple and acacia had low tearing strength. The tensile and bursting strength of Australian pine was somewhat lower than that of the other pulps in this group.

Of the dual purpose woods—i.e., those containing tannin in the wood and bark—the best species from the standpoint of pulp characteristics are white stopper, snakewood, and wild tamarind. Snakewood gave a relatively low yield of pulp. The poor tearing strength of wild tamarind may be a disadvantage for certain uses.

The species which have no tannin in the bark or wood produced pulps which were inferior in strength characteristics.

The results obtained in this exploratory survey may differ somewhat from those which would be obtained in a critical comparison of the individual species. At a later date, it may be desirable to investigate the relative merits of the more promising species under optimum wood and cooking conditions with the kraft and perhaps other processes. For such a study, the characteristics of the raw material selected to be representative would be evaluated.

Acknowledgment

The experimental portion of this paper was carried out by Donald Niemeyer, Walter P. Molda, and K. Helge Holm of the Institute staff.

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Lake States Hears Walter Hendrich

Walter G. Hendrich, plant manager of the Byron Weston Paper Company, Dalton, Mass., was the principal speaker at the March 14 meeting of the Lake States Section of the Technical Association of the Pulp and Paper Industry held at the Conway Hotel, Appleton, Wis. Mr. Hendrich indicated how his company is introducing up to date ideas to a mill that has long followed the traditional rag mill procedures. Taking the Byron Weston Company as an example he showed how the technical staff kept a complete file of past, present and contemplated technical improvements on each unit operation from rag stock preparation to the finishing room. In this way, the technical department, at any time, can present to the management the complete picture of what can be done at once or what can be developed for post war application.

The next meeting of the Lake States Section will be held jointly with the Northwest Division of the Superintendents Association at Wausau, Wis., on Saturday, April 22.

Those present at this meeting included: Allen Abrams, F. J. Allard, J. W. Appling, A. G. Beaman, J. C. Bletzinger, M. L. Brett, L. J. Braehm, J. B. Catlin, H. A. Chuse, T. Collins, J. H. Compton, P. F. Cundy, H. P. Dixson, D. W. Davis, G. K. Dickerman, G. F. Enderlein, W. A. Fannon, J. Folstadt, L. V. Forman, H. V. Fredricks, K. W. Fries, W. H. Graebner, John Graff, H. H. Haldeman, John Handyside, Fred Hanson, J. A. Hanson, C. Harmon, Walter Hendrich, T. A. Howells, E. Jandron, H. S. Johnston, W. R. Keelett, B. Pennings, A. Phillips, J. R. Probst, R. M. Radsch, E. Rasmussen, J. R. Salvesen, F. W. Sanders, R. A. Stillings, J. A. Van den Akker, M. W. Van de Laarschot, Vern Varhus, E. H. Voigtman, C. L. Wagner, J. P. Weidner, S. D. Wells and D. G. Wiclch.

The Story of Wood Pulp

The Story of Wood Pulp—what it is, how and where it is made, and what it is used for, in Peace and in War—is told in a new illustrated booklet "Wood Pulp . . . A Basic American Industry" just released by Oliver M. Porter, executive director of the United States Pulp Producers Association.

The purpose of this booklet, as described by Mr. Porter, is "to indicate the extent to which the products of the United States Pulp Industry are meeting the requirements of war and essential civilian needs. It tells in simple, non-technical language the complicated processes by which a part of our vast forest heritage is converted into products which serve the nation—in peace and in war."

In its foreword, Mr. Porter states that "When war came, it was necessary for American industry and commerce to concentrate immediately on the production of essential goods and services. The wood pulp industry of the United States met that challenge. Despite increasing difficulties resulting from inadequate supplies of labor, wood and transportation, this basic American industry has increased its production of specialized pulps needed in the war effort and has supplied an increasing share of the pulps required by the government agencies and civilian populations of all of the Allied Nations."

This booklet outlines the extent to which new developments in the pulp industry enabled it to meet the requirements of a nation fighting for its very existence—requirements in respect to "the printed word," "communications," "product containers," "sanitary products" and "new fiber-base products," which could not have been met without wood pulp.

This booklet contains a brief sketch of the history and growth of the United States pulp industry; describes the various processes by which the major grades of pulp are produced; indicates the importance of wood pulp in every home and industry in America as well as on the far-flung battle fields of this global war; and concludes with an outline of the public responsibilities of the Wood Pulp Industry in respect to reforestation, fire prevention and stream purification. It is an interesting and convincing presentation of the economic, social and political significance of this basic American industry.

Editorial supervision of the booklet was under the direction of Harry Houghton, chairman, public relations committee of the United States Pulp Producers Association. William E. Rudge's Sons, New York, are the designers and printers.

Copies of "Wood Pulp . . . A Basic American Industry" describing wood pulp as a weapon of war and an instrument of peace, may be obtained from the United States Pulp Producers Association at 122 East 42nd street, New York 17, N. Y.

Pro's and Con's Regarding the Recovery of Fibers from White Water*

By K. W. Fries[1] and J. D. Gaffney[2]

Abstract

Microscopic studies were made of the fibrous material in paper mill and pulp mill waters. It is shown that the fibers of the white water from certain paper grades are valuable and should be recovered, while those from other grades are not desirable and should be discarded.

Pulp mill white waters should in most cases be passed through some type of filter in order to remove pitch-carrying ray cells before the water is sent back into the pulp system.

Indiscriminate recirculation of white water and reuse of recovered fibers may result in pitch trouble on the paper machines and may more than offset any benefits derived from savings of stock.

The recovery of fibers from pulp and paper mill effluents has always been a controversial question among papermakers. On the one hand, it is desirable to reduce losses of valuable solids with the outgoing white water to a minimum. Very substantial savings have been reported by mills that have installed efficient savealls and who are in a position to determine their effluent losses accurately. On the other hand, many white waters that circulate around in the mill are wash waters containing suspended solids such as pitch, ray cells, and fiber fragments which are undesirable in the stock and should be removed before the water is sent back into the operating system. If white water from deckers and thickeners in a pulp mill is recirculated indiscriminately, pitch carrying ray cells will accumulate in the water to a point where about the same amount of pitch is put back into the stock as is removed through the wire with the white water. Pitch removal from the pulp is, therefore, practically nil and pitch is carried along to the paper mill where it will cause more or less difficulties on the paper machine, depending on the efficacy of the different makeshift expediencies for the prevention of pitch trouble. If, for reasons of water economy, white water of the type just mentioned must be recirculated, it should first pass through an efficient saveall where all the finely divided solids are completely removed before it reenters the stock system, and the collected solids should be disposed of in some manner so that they cannot do any harm, with the view in mind, of course, of ultimate utilization.

To shed some light on the problem—which white waters carry valuable solids, and which carry a type of solids that should be eliminated—a qualitative survey was made of the white waters from the paper machines on the different grades and from the different operating steps in the paper mill.

Preliminary microscopic studies revealed that whenever recirculated water caused trouble, it was especially rich in pitch-carrying ray cells.

In the survey, the number of ray cells in the white water solids was determined by microscopic count in a given field. Another slide was used for photomicrographs so as to have a permanent record for future reference. For the microscopic count the slides were stained with the "C" stain *(1)*. The method employed for making the photomicrographs was that of Perot and Schultz *(2)*. It is very simple to carry out, does not require much time, and is rather inexpensive. These slides were not stained.

TABLE I.—WHITE WATER SURVEY OF PAPER MILL

Grade No.	Ray Cells by Number in Fibrous Materials: White Water to Saveall %	Recovered Fibers %	Saveall Effluents %	Remarks
1	12.7	10.3	16.0	Contains TiO_2
2	15.2	13.5	22.7	Contains TiO_2
3	18.4	14.5	21.5	
4	18.3	13.1	25.9	
5	20.1	14.3	22.5	
6	22.5	19.1	23.9	
7	23.6	16.6	27.5	
8	26.1	17.7	32.7	
9	26.9	20.0	30.6	
10	38.5	33.9	44.0	
11	72.1	...	...	

Paper Mill White Waters

A summary of results of the paper mill survey are given in Table I and are shown in photomicrographs. The different grades are listed from Nos. 1 to 11 according to degree of hydration, the most hydrated sheet being No. 1, and the freest, No. 11.

It can be seen that with highly hydrated sheets and with those containing mineral filler, the white water contains less pitch-carrying ray cells than with freer sheets that are not loaded. Slow sheets permit considerably fewer ray cells to filter through the mat than free sheets since the fiber mat on the wire is apparently so dense that the ray cells cannot escape with the white water, and consequently remain in the sheet. They are therefore taken out of circulation and cannot do any harm.

With a free sheet, however, the ray cells are washed out of the web and pass through the wire with the white water. If the fibers are recovered

TABLE II

Sample No.	Ray Cells by Number in Solids of White Water: White Water Tank %	White Water from Thickeners %	White Water from Deckers %	White Water from Wet Machine %
1	90.8	78.5	89.4	69.6
2	88.8	54.3	88.4	89.0
3	66.7	67.6	80.6	79.0
4	85.5	68.3	81.7	73.8
5	74.6	77.8	74.8	82.4
6	84.8	65.0	88.0	71.8
7	79.8	65.3	83.2	77.0
8	84.2	59.2	76.5	68.7
9	88.2	65.6	87.3	77.6
10	86.3	71.8	99.7	89.6
11	88.7	60.0	92.8	92.8
12	84.3	80.0	91.8	86.9
13	53.6	66.0	93.4	89.6
14	88.5	76.8	87.0	89.5
15	91.5	66.3	91.0	....
Av.	82.3	68.1	87.0	81.0

* Presented at the Annual Meeting of the Technical Association of the Pulp & Paper Industry, Hotel Commodore, New York, N. Y., Feb. 14-17, 1944.

[1] Member TAPPI; Technical Director, Rhinelander Paper Company, Rhinelander, Wis.

[2] Chemist, Rhinelander Paper Company, Rhinelander, Wis.

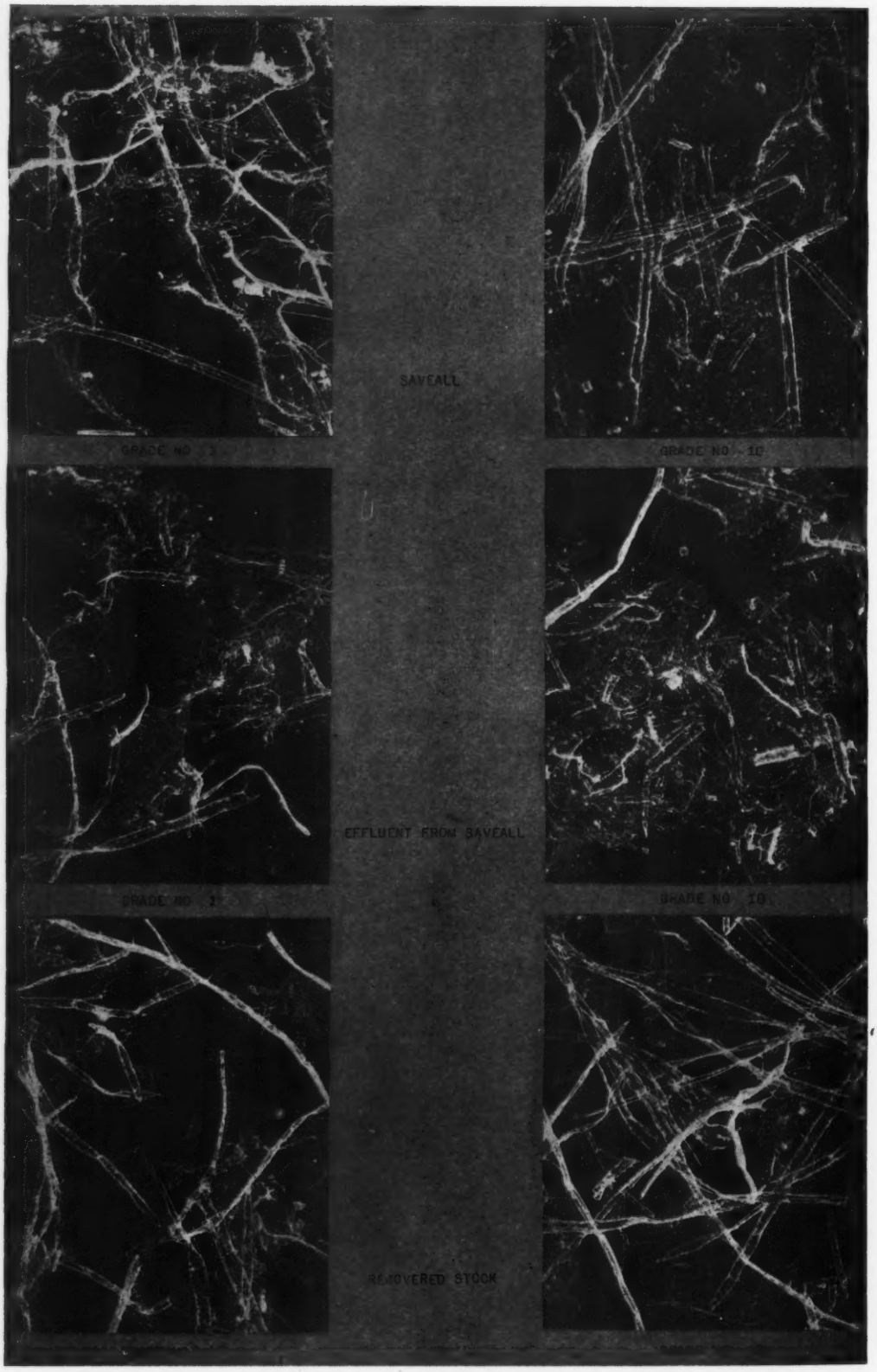

FIG. 1
Paper Mill White Waters

from the white water, a serious condition will, therefore, be created due to accumulation of pitch on the wire, and a decision must be made as to whether or not fibers should be recovered, and if so, what should be done with them. If it is necessary because of a shortage of water to reuse the water in the system, the fibers should first be separated from the water before it is sent back to the stock system. However, where the white water is only used for showers on the return wire, it should not be necessary to eliminate the fibers because the impact of the water on the wire is so forceful that the small ray cells are driven through the wire and cannot accumulate into spots.

It can also be seen that a certain degree of elimination of ray cells takes place as the white water passes through a Bird saveall. The effluent contains a larger percentage of ray cells than the ingoing white water and the ray cell content of the recovered fibers is slightly less.

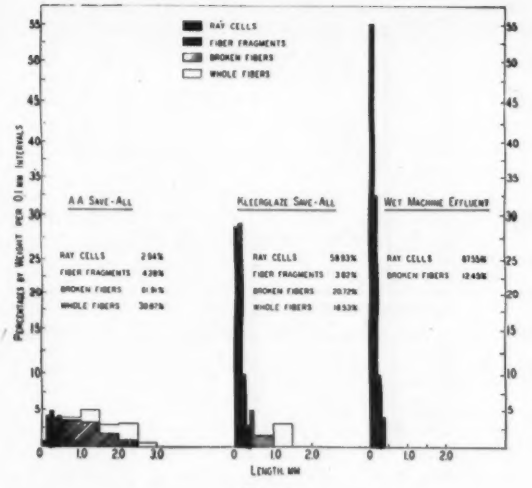

FIG. 3
Percentage by Weight of Fibrous Material in Different White Waters

Pulp Mill White Waters

A survey of the pulp mill gave some very striking

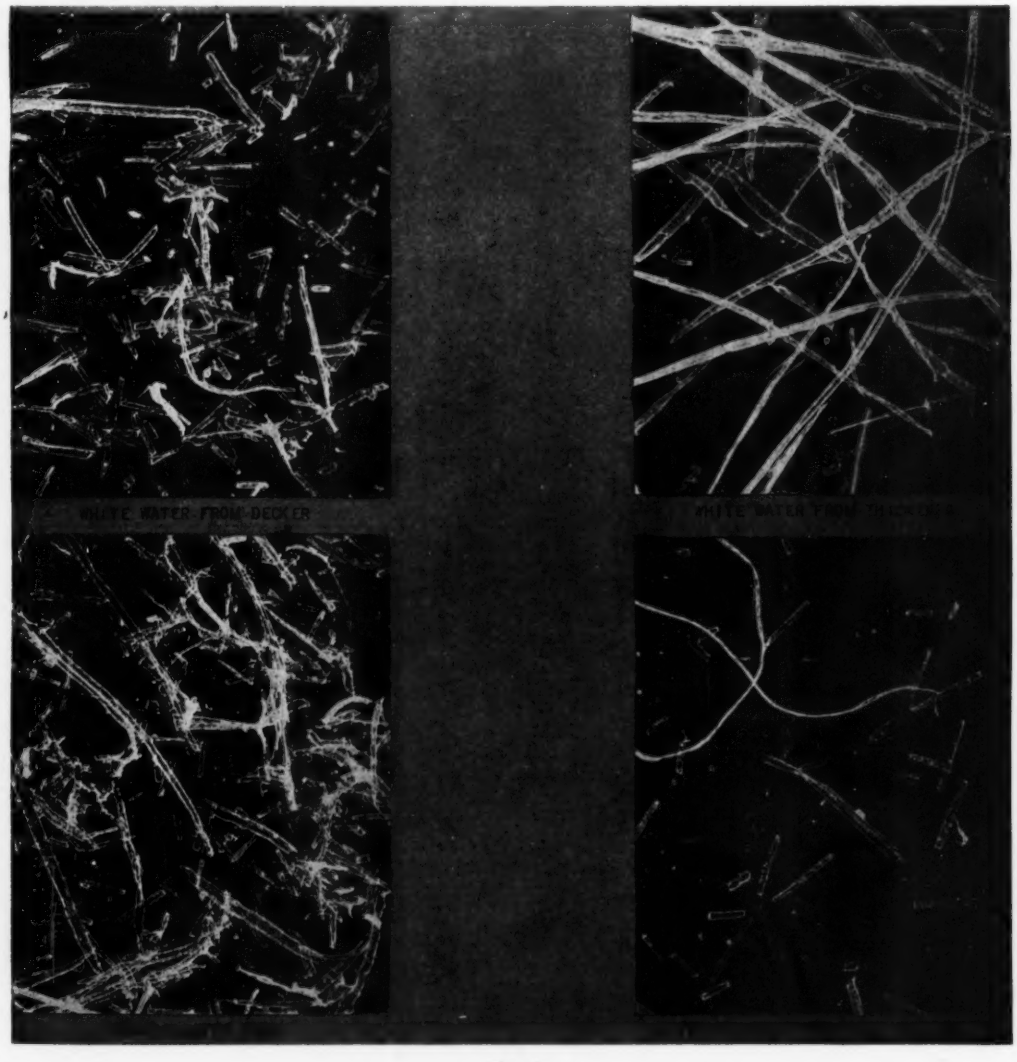

FIG. 2
Pulp Mill White Waters

results. It showed that a thorough study of the quality of the suspended material in the white water should be made before decisions are made in regard to white water utilization.

Table II and Fig. 2 show that the fibers contained in the pulp mill white water are of no value for paper making and should therefore be removed before the white water reenters the stock system.

The disposition of these recovered ray cells depends on the local conditions. To discharge them into the stream is hardly recommendable because it may invoke the criticism of State Health Departments and of Fish and Game Commissions. It may be possible to incorporate them in some board grades or to segregate for chemical utilization. They are very rich in pitch, especially in ether extractables and may yield some valuable materials if properly treated.

Finally, the percentages by weight of the various fiber constituents of the different white waters were determined and the results are shown in Fig. 3. As can be seen, the white water going to the saveall of an AA glassine sheet contains only very few ray cells and a relatively large portion of whole fibers, while that of a free Kleerglaze sheet has a dangerously large proportion of ray cells. The wet machine effluent in the pulp mill carries no whole fibers, practically all the fibrous constituents being ray cells.

It may be suggested that wherever the problem of recovering solids from white water or of recirculating white water is under discussion, a careful study should be made as to the quality of the suspended material before a decision is made. The outcome of these rather inexpensive investigations may safeguard against serious disappointment at a later time. These studies will also be very helpful in choosing the most efficient type of saveall for removal of the suspended solids.

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2. Perot, J. J., and Schultz, C. G., *Paper Trade J.* 117, No. 23:33-4, (Dec. 2, 1943).

H. L. Derby Named Chairman

Harry L. Derby, newly appointed chairman of the Committee on Veterans Employment Problems of the National Association of Manufacturers, has called upon employers throughout the nation to give the returning veteran "his second best welcome."

"The veteran is going to get his top welcome from his family, of course," Mr. Derby said. "But it behooves the business men of this country, whether they be in industry, agriculture, transportation or distribution, to give the veteran his second best welcome. The reception that the veteran gets when he returns to his old job, will go a long way in determining whether future relations between employer and employe will be amicable with maximum and mutual understanding, confidence and trust."

President of the American Cyanamid and Chemical Corporation, Mr. Derby inaugurated a program for veterans' employment within the chemical industry several months ago and is thoroughly familiar with the many complex problems that must be solved in designing workable plans for rehabilitation and reemployment.

In announcing the appointment of Mr. Derby, Robert M. Gaylord, NAM president, said that he intended that the work of this committee should be among the association's foremost 1944 activities, "because I regard the reemployment of our returning service men and women as the most serious problem that America faces in the transition and immediate postwar days ahead. This committee can perform a great constructive service to industry and to the nation in helping to meet and solve this problem."

Mr. Derby, long-time champion of sound human relations between employer and employe, said that the committee would number more than 50 top-flight industrial executives, most of them well known for clear, advanced thinking in the field of improved industrial relations.

R. L. Weldon Comments on Newsprint

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, Que., March 20, 1944—Some comment on pulpwood and newsprint prices is offered by R. L. Weldon, president of the Bathurst Pulp and Paper Company in reporting to the shareholders on the company's annual statement. Referring to newsprint increases aggregating $8 per ton effected in 1943 and was increased in February, 1944, of $8 per ton in the export price of unbleached sulphite pulp, the first change since July, 1940, he said that these increases will assist, although they will not offset increases in costs which have taken place since.

"Current indications," he said, "are for further sizeable increases in the cost of pulpwood; a substantial increase in the price of coal was recently announced, and general wage rates have also been increased . . ." Payroll costs in 1944, will, therefore reflect the increased rates of pay which became effective January 1 and Mr. Weldon adds that it is now possible that the increases awarded will be made retroactive to some date in 1943, which will have to be absorbed in 1944.

The general supply situation for pulpwood, he notes, continues serious because of labor shortages, although the company expects to have a sufficient supply of pulpwood to maintain full operations. The company discontinued newsprint production as from January 31, 1944, on instructions from the Wartime Prices and Trade Board, the result of which, he said, would be to augment manufacture of kraft liner and corrugating boards, which are in short supply at the present time.

Emulsion Technology

The Chemical Publishing Company has recently issued a very interesting 290 page book entitled Emulsion Technology, Theoretical and Applied. It contains a number of papers included in a symposium on emulsions at the second symposium held by the British Section of the International Society of Leather Trades Chemists. Of particular interest to the paper industry is a chapter by Miss R. M. K. Cobb, research director of the Lowe Paper Company on the fundamental principles of practical emulsions manufacture. This chapter contains a list of emulsifying agents, outlines emulsifying methods, stabilization, storage and shipping conditions. Other chapters cover such subjects as emulsion in the patent literature, industrial emulsion formulation, design of emulsifying machines, rubber latex, properties of dispersions of asphaltic bitumen and the stability of emulsions in thin films.

Copies may be obtained from the Book Department of the Technical Association of the Pulp and Paper Industry, 122 East 42nd street, New York City, at $5.00 per copy.

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New York Paper and Pulp Market Review

Container Board Allocation By WPB Starts April 1—Demand For Paper and Pulp Continues Heavy — Cotton Rag Markets Strong — Collection of Waste Paper In Victory Campaign Falls Below Quota.

Office of the PAPER TRADE JOURNAL,
Wednesday, March 22, 1944.

Heavy demand and a relatively high production of paper and paper board is reported for the week. Concern that the current trend may result in a more curtailed supply of paper for civilian use is present in most reports received from manufacturers' representatives, jobbers. and general paper merchants at this date.

The serious container board supply situation, according to the WPB, makes it necessary to distribute it through allocation control, starting April 1, 1944.

The index of general business activity for the week ended March 11 declined to 143.2 from 144.8 for the previous week, compared with 136.6 for the corresponding week last year. The index of paper board production was 144.2, compared with 146.9 for the previous week and with 145.5 for the corresponding week last year.

Paper production for the week ended March 11 was estimated at 89.1%, compared with 89.8% for 1943, with 101.9% for 1942, with 91.8% for 1941, and with 84.5% for the corresponding week for 1940.

Paper board production for the week ended March 11 was 93.0%, compared with 93.0% for 1943, with 100.0% for 1942, with 82.0% for 1941, and with 70.0% for the corresponding week for 1940.

Wood Pulp

Pulpwood production for January and February declined some 35% under the previous year, due to bad weather, transportation difficulties, and higher costs. Higher price ceilings placed on pulpwood in important regions in the south and southeast range from 80 cents to $1.10 per cord. The new price, effective March 11, 1944, on rough pine is $7.60 per cord. The former price was $6.80 per cord. It is expected that this increase price will result in the cutting of more wood.

Rags

Mill buying of all grades of cotton cuttings continues active. Supplies are limited by the lack of labor. Prices are unchanged at ceiling levels.

The old cotton rag market is strong, with mills reported unable to obtain all the roofing grades required. Prices are firmly maintained at ceiling levels.

Old Rope and Bagging

No important change in the old rope market has been reported this week. Demand continues heavy for old No. 1 Manila, with supplies under urgent mill needs. Prices are at ceilings.

Mill buying of scrap bagging is on a limited scale. Trading is currently reported slow and prices soft. Quotations continue of a nominal nature.

Old Waste Paper

Mill demand for all grades of waste paper continue urgent. Prices are very firm at ceiling levels. Substantially larger quantities of paper stocks are needed by board mills than are now being received. Edwin S. Friendly, chairman of the Newspaper Committee, U. S. Victory Waste Paper Campaign, states that the campaign is still behind its quota. Collections for the week ended February 23 were 132,000 tons, or 23,000 tons below the weekly quota.

Twine

Demand for all grades of twine obtainable for civilian consumption continues active. Prices are firm and unchanged. No change in the supply situation has been reported this week.

Michigan Division Meets April 13

To avoid conflicting with the date of the spring meeting of the Northwestern Division of the American Pulp and Paper Mill Superintendents Association to be held at Wausau, Wis., on April 21-22 inclusive, the Michigan Division of the American Pulp and Paper Mill Superintendents Association will meet on Thursday, April 13. This moves the date of the meeting ahead one week so that it will be held on the second Thursday of the month instead of on the customary third Thursday. The Coating Committee, composed of Leon Mimms, chairman, Leo Willoughby, Henry Nendorf and Everett Hayes with the assistance of O. W. Callighan are making arrangements for a coating program, details of which will be announced as soon as the plans are completed.

Kimberly-Clark Announce Promotions

J. R. Kimberly, vice-president in charge of Sales, has announced several promotions in the Kimberly-Clark Corporation sales organization.

C. F. Jenkins has been appointed general sales manager. L. Stedman, formerly sales manager of the Eastern Territory, becomes sales manager of the Paper Division; R. B. Sawtell is now sales manager of Creped Wadding Products; the War Products Division Sales will be headed up by W. W. Cross, sales manager, and A. G. Sharp is to manage sales engineering—all with headquarters at Neenah, Wis.

G. E. O'Malley has been appointed district manager of Paper Sales in the East, with headquarters in New York.

C. H. Stallman is Commissioned

PHILADELPHIA, Pa., March 20, 1944—Announcement is made by the P. H. Glatfelter Company, Spring Grove, Pa., of the commission of Charles H. Stallman as Lieutenant (jg) U.S.N.R.

Mr. Stallman has been associated with the Glatfelter Company in the sales department and also as advertising manager. The territory formerly covered by him will be handled by the main office and the New York office of the company.

Abe Cooper Buys Skaneateles Plant

Abe Cooper, president of the Bagley & Sewall Company, Watertown, N. Y., has purchased the plant of the U. S. Gypsum Company at Skaneateles Falls, N. Y. The equipment will be dismantled and sold.

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MISCELLANEOUS MARKETS

Office of the PAPER TRADE JOURNAL,
Wednesday, March 22, 1944.

BLANC FIXE—Prices on blanc fixe continue to conform to prevailing quotations. Demand is reported fair. The pulp is quoted at $40 per ton, in barrels, at works. The powder is quoted at $60 per ton, f.o.b. works.

BLEACHING POWDER—Demand is reported active with the supply situation satisfactory. Quotations are unchanged. Bleaching powder is currently quoted at from $2.50 to $3.10 per 100 pounds. All prices in drums, car lots, f.o.b. works.

CASEIN—OPA maximum prices on processed acid-precipitated casein are as follows: 10,000 pounds or more, 24 cents per pound; 2,000 pounds, 24½ cents per pound; less than 2,000 pounds, 24¾ per pound, f.o.b. works. Imported, 9¼ cents per pound, f.o.b. source.

CAUSTIC SODA—Demand heavy. Shipping situation reported a little improved but market is still tight. Prices continue unchanged. Solid caustic soda is currently quoted at $2.30 per 100 pounds. The flake and ground are currently quoted at $2.70 per 100 pounds. All prices in drums, car lots, f.o.b. works.

CHINA CLAY—Current demand is reported moderate on many grades of china clay. Quotations continue to conform to prevailing prices. Domestic filler clay is quoted at from $7.50 to $15 per ton; coating clay is currently quoted at from $12 to $22 per ton, at mines. Imported china clay is currently quoted at from $13 to $25 per long ton, ship side.

CHLORINE—Demand active, with all allocation requirements met. Prices continue unchanged. Chlorine is currently quoted at $1.75 per 100 pounds, in single-unit tank cars, f.o.b. works.

ROSIN—The rosin market reports higher prices on some grades this week. "G" gum rosin is currently quoted at $4.76 per 100 pounds, in barrels, at Savannah. "FF" rosin is currently quoted at $4.73 per 100 pounds, in barrels, at New York. Seventy per cent gum rosin size is currently quoted at $5.03 per 100 pounds, f.o.b. works.

SALT CAKE—Prices on salt cake continue to be reported unchanged. Demand is moderate for the current week. Domestic salt cake is currently quoted at $15 per ton, in bulk. Chrome cake is currently quoted at $16 per ton. All quoted prices in car lots, f.o.b. shipping point.

SODA ASH—The supply situation in soda ash continues tight under a very heavy industrial demand. Prices continue to conform to prevailing levels. Quotations on soda ash in car lots, per 100 pounds, are as follows: in bulk, $.90; in paper bags, $1.05; and in barrels, $1.35.

STARCH—Cash corn available for trade consumption continues limited and market is still tight on corn and corn products. Prices unchanged on starch. Pearl is quoted at $3.72 per 100 pounds. Powdered starch is quoted at $3.83 per 100 pounds. All prices in bags, car lots f.o.b. Chicago.

SULPHATE OF ALUMINA—Demand moderate. Supply situation is reported well balanced at this date. Prices of the commercial grades are currently quoted at from $1.15 to $1.25 per 100 pounds. The iron free is currently quoted at $2.35 per 100 pounds. All prices in bags, car lots, f.o.b. works.

SULPHUR—Current consumption of sulphur continues heavy with no change in the market situation. Quotations on annual contracts are unchanged at $16 per long ton, f.o.b. mines. The current price on contracts at Gulf Ports continues unchanged at $17.50 per long ton.

MARKET QUOTATIONS

All market quotations, excepting those otherwise designated as official OPA maximum prices, are based on the manufacturers' price level as of October 1-15, 1941; maximum wholesale prices are based on the merchants' maximum prices for stipulated quantities at a quoted price to all customers of a like class, as shown by the merchant's sales records of goods delivered during March, 1942. A merchant's price list in effect in March 1942, showing quotations of actual shipments, will establish the current maximum prices.

Paper

(Delivered New York)

News, per ton—			
Roll, contract...	*$58.00	@	—
Sheets	64.00	"	—
* OPA Maximum Price.			
Kraft—per cwt.—Carload Quantities Zone A, f.o.b. Mill			
Superstandard Wrapping	*$5.25	@	—
No. 1 Wrapping...	*5.00	"	—
Standard Wrapping	*4.75	"	—
Standard Bag.....	*4.375	"	—
* OPA Manufacturers' Prices.			
Tissues—Per Ream—Carlots			
White No. 1.....	1.12½	"	—
White No. 1 M. G.	1.10	"	—
White No. 1½....	1.00	"	—
White No. 2.....	.90	"	—
Anti-Tarnish M.F..	1.20	"	—
Colored	—	"	—
Kraft	.95	"	—
Manila	.90	"	—
Toilet—1 M. Sheets—Per Case			
Unbleached	4.25	"	—
Bleached	5.70	"	—
Unbl. Toilet, 1 M.	4.16	"	—
Bleached Toilet...	5.70	"	—
Paper Towels, Per Case—			
Unbleached, Jr.....	2.20	"	—
Bleached, Jr.....	3.20	"	—
Manila—per cwt.—C. l. f. a.			
No. 1 Jute.....11.25		@	—
No. 1 Manila Wrapping, 35 lb.....	6.00	"	6.25
No. 2 Manila Wrapping, 35 lb.....	5.75	"	6.00
Boards, per ton—			
News *48.00		@	—
Chip *48.00		"	—
Sgl. Mla. Ll. Chip	*60.00	"	—
White Pat. Coated	*75.00	"	—
Kraft Liners 50 lb.	*63.00	"	—
Binders Boards....84.00		"	116.00

* OPA Base Prices per 10 tons. Less than 10 tons but over 3 tons, add $2.50; three tons or less, add $5; regular 35-39 basis, add $5.; basis 40-49, add $2.50; basis 91-100, add $2.50; basis 101-120, add $5.

The following are representative of distributors' resale prices:

Rag Content Bonds and Ledgers—White, Assorted Items, Delivered in Zone 1:

100% Rag Ext.	Bonds	Ledgers
No. 1	$39.10@$46.00	$40.25@$47.25
100% Rag	32.20 " 37.75	33.35 " 39.25
85% Rag	.... "	29.90 " 35.00
75% Rag	23.00 " 27.00	24.15 " 28.25
65% Rag	.... "	22.80 " 27.75
50% Rag	18.70 " 22.75	19.90 " 24.25
25% Rag	16.40 " 20.00	17.55 " 21.50

Colors at $1.00 cwt. extra.

Sulphite Bonds and Ledgers—White, Assorted Items. Delivered in Zone 1:

	Bonds	Ledgers
No. 1..	$10.55@$12.75	$11.70@$14.25
No. 2..	9.65 " 11.75	10.80 " 13.25
No. 3..	9.20 " 11.25	10.35 " 12.50
No. 4..	8.90 " 10.75	10.05 " 12.25

Colors $1.00 cwt. extra.

Free Sheet Book Papers—White, Cased Paper. Delivered in Zone 1:

No. 1 Glossy Coated...	$13.65	@	$15.50
No. 2 Glossy Coated...	12.40	"	14.00
No. 3 Glossy Coated...	11.60	"	13.25
No. 4 Glossy Coated...	11.15	"	12.75
No. 1 Antique (watermarked)	10.25	"	11.75
No. 2 Offset.....	9.60	"	11.00
A Grade E. F.....	9.35	"	10.75
A Grade S. & S. C....	9.60	"	11.00
B Grade E. F.....	8.85	"	10.25
B Grade S. & S. C....	9.10	"	10.50
C Grade E. F.....	8.55	"	9.75
C Grade S. & S. C....	8.80	"	10.00
D Grade E. F.....	8.25	"	9.50
D Grade S. & S. C....	8.50	"	9.75

Ivory & India at $.50 cwt. extra.

Wood Pulp

OPA Maximum Prices and Canadian Manufacturers Prices, Less Freight. Not Exceeding OPA Allowances.

Bl. Softwood Sulphite.....	$86.00
Unbl. Softwood Sulphite.....	74.00
Bl. Hardwood Sulphite.....	83.50
Unbl. Hardwood Sulphite.....	71.50
Bl. Mitscherlich.....	81.00
Unbl. Mitscherlich.....72.00 @	82.00
N. Bleached Sulphate.....	86.00
S. Bleached Sulphate.....	79.00
N. Semi-Bleached Sulphate..	84.00
S. Semi-Bleached Sulphate	75.00
N. Unbl. Sulphate.....	73.00
S. Unbl. Sulphate.....	63.50
Bl. Soda	72.00
Unbl. Soda	68.00
Groundwood	50.00

Transportation Allowances Applying to Producers of Wet Wood Pulp.

	Below 50% Air Dry Weight
Northeast	$13.50
Lake Central	13.50
Southern	16.00
West Coast (in area).....	10.50
West Coast (out area).....	16.50

	50%-80% Air Dry Weight
Northeast	$11.50
Lake Central	11.50
Southern	14.00
West Coast (in area).....	9.50
West Coast (out area).....	15.50

Applying to Producers of Dry Wood Pulp.

	Above 80% Air Dry Weight
Northeast	$8.50
Lake Central	8.50
Southern	11.00
West Coast (in area).....	7.50
West Coast (out area).....	13.50

Should freight charges actually exceed these allowances, the difference may be added to the maximum prices

Domestic Rags

New Rags

(Prices to Mill f. o. b. N. Y.)

Shirt Cuttings—			
New White, No. 1..	6.50	@	7.25*
Silesias No. 1.....	—	"	5.75*
New Unbleached...	6.75	"	7.50*
Blue Overall.....	—	"	5.50*
Fancy	—	"	3.50*
Washables	—	"	3.00*
Bleached Khaki Cuttings	—	"	4.25*
Unbleached Khaki Cuttings	—	"	3.50*

* OPA Maximum Prices.

ENGLISH ECCO CLAYS

ECCO CLAYS
TRADE MARK

UNIFORM • SUPERIOR • DEPENDABLE

English China Clays Sales Corporation
551 Fifth Avenue, New York City

More than just a TRADE MARK

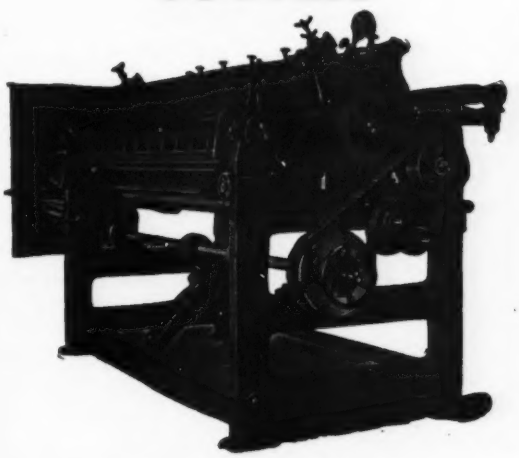
EXCELSIOR KNOX Woolen Co. Camden, Me. FELTS & JACKETS

BUT also a guarantee by men who for 78 years have prided themselves in making finer felts. TO YOU —this is the mark of dependability, longer felt life and greater saving.

KNOX WOOLEN CO.
CAMDEN, MAINE.

MODEL 28

ROLLER BEARING CUTTER



HAMBLET MACHINE CO.
LAWRENCE, MASS.

MAKERS OF
SINGLE, DUPLEX AND DIAGONAL PAPER CUTTERS
CUTTER KNIVES, PATENT TOP SLITTERS.

Mill Cogs

ON SHORTEST POSSIBLE NOTICE

We make all kinds of Mill Cogs and have special facilities that will be of great service to you. We make a specialty of "ready dressed" cogs which are

READY TO RUN

the moment driven and keyed. Write at once for circular "G" and instruction sheets free.

THE N. P. BOWSHER CO.
South Bend, Ind.
Established 1882

NEW MODEL • HIGHEST ACCURACY
CHRONOMETRIC
TACHOMETER

Readability to 1 RPM per division. Guaranteed accuracy well within ½ of 1%. Indicates RPM directly on the dial without any calculations over a fixed period of 6 seconds. Negligible torque. Two models with ranges 0-1000 RPM or 0-10,000 RPM, each suitable for double rated range.

Write for Bulletin No. 715

HERMAN H. STICHT CO. INC.
27 PARK PLACE NEW YORK N. Y.

Old Rags

White, No. 1—			
Repacked	*3.80	"	—
Miscellaneous	*3.20	"	—
White, No. 2—			
Repacked	*2.90	"	—
Miscellaneous	*2.65	"	—
Third and Blues—			
Repacked	*2.20	"	—
Miscellaneous	*1.80	"	—
Roofing Rags—			
No. 1	*1.55	"	—
No. 2	*1.45	"	—
No. 3 (bagging)	*1.35	"	—
No. 4	*1.35	"	—
No. 5A	*1.35	"	—
Old Manila Rope	5.75	"	—

OPA Maximum Prices.

Foreign Rags

All Prices nominal

New Rags			
New Dark Cuttings	2.25	@	2.40
New Mixed Cuttings	2.00	"	2.20
New Light Silesias	5.50	"	5.75
Light Flannelettes	5.50	"	5.75
New White Cuttings	7.00	"	7.50
New Light Oxfords	4.00	"	4.50
New Light Prints	3.00	"	3.25
Old Rags			
No. 1 White Linens	7.50	"	8.50
No. 2 White Linens	6.50	"	7.50
No. 3 White Linens	4.50	"	—
No. 4 White Linens	2.25	"	3.25
No. 1 White Cotton	4.25	"	4.75
No. 2 White Cotton	3.25	"	3.75
No. 3 White Cotton	2.50	"	3.00
No. 4 White Cotton	1.90	"	2.20
Extra Light Prints	2.00	"	2.40
Ord. Light Prints	1.75	"	2.15
Med. Light Prints	1.55	"	1.95
Dutch Blue Cottons	2.25	"	2.50
French Blue Linens	3.00	"	—
Checks and Blues	2.00	"	—
Linsey Garments	1.90	"	2.00
Dark Cottons	1.50	"	1.60
Old Shopperies	1.30	"	1.45
New Shopperies	1.45	"	1.50
French Blues	2.25	"	2.50

BAGGING

(Prices to Mill, f. o. b. N. Y.)

Gunny No. 1—			
Foreign	Nominal		
Domestic	4.25	@	4.35
Wool Tares, light	4.25	"	4.50
Wool Tares heavy	4.50	"	5.00
Bright Bagging	4.50	"	4.85
Manila Rope—			
Foreign	—	"	—
Domestic	*5.75	"	—
Jute Threads	5.50	"	—
No. 1 Sisal Strings	*4.00	"	—
Mixed Strings	2.00	"	—

* OPA Maximum Price.

Old Waste Papers

(F. o. b. New York)

OPA Maximum Prices

No. 1 Hard White Envelope Cuts, one cut	3.37½	@	—
No. 1 Hard White Envelope Cuts	3.12½	"	—
No. 1 Hard White Shavings, unruled	2.87½	"	—
No. 1 Hard White Shavings, ruled	2.50	"	—
Soft White Shavings, one cut	2.87½	"	—
No. 1 Soft White Shavings	2.50	"	—
Soft White Shavings, Misc.	2.15	"	—
No. 1 Fly Leaf Shavings	1.67½	"	—
No. 2 Fly Leaf Shavings	1.12½	"	—
No. 1 Groundwood Fly Leaf Shavings	1.25	"	—
No. 2 Mixed Groundwood Fly Leaf Shavings	.90	"	—
Mixed Colored Shavings	.75	"	—
Mixed Groundwood Colored Shavings	.90	"	—
Overissue Magazines	1.67½	"	—
No. 1 Heavy Books & Magazines	1.67½	"	—
Mixed Books	.85	"	—
No. 1 White Ledger	2.17½	"	—
No. 2 Mixed Ledger, colored	1.87½	"	—
New Manila Envelope Cuttings, one cut	2.87½	"	—
New Manila Envelope Cuttings	2.65	"	—
Extra Manilas	1.85	"	—
Mixed Kraft, Env. & Bag Cuttings	2.75	"	—
Kraft Envelope Cuttings	3.25	"	—
Triple Sorted, No. 1 Brown Soft Kraft	2.50	"	—
New 100% Kraft Corrugated Cuttings	2.25	"	—
No. 1 Assorted Old Kraft	1.75	"	—
New Jute Corrugated Cuttings	.90	"	—
Old 100% Kraft Corrugated Containers	1.75	"	—
Old Corrugated Containers	1.15	"	—
Box Board Cuttings	.72½	"	—
White Blank News	1.65	"	—
Overissue News	.85	"	—
No. 1 News	.75	"	—
No. 1 Mixed Paper	.70	"	—
Old Corrugated Containers	.82½	"	—
Mill Wrappers	.85	"	—

Twines

All Prices Nominal

(F. o. b. Mill)

(Soft Fiber)

Coarse Polished—			
India	.21	@	—
White Hemp	.21	"	—
Fine Polished—			
Fine India	.26	"	—
Unpolished—			
Box	.17½	"	—
Paper Makers	.17	"	—
Tube Rope	.19	"	—
Wall Paper	.20½	"	—
Wrapping	.23	"	—
Soft Fiber Rope	.19	"	—
Cotton	.25	"	—
(Hard Fiber)			
Medium Java	.18	"	—
Mex. Sisal	.16	"	—
Manila		"	—

PHILADELPHIA

Domestic Rags (New)

(Price to Mill.)

Shirt Cuttings—	
New White No. 1	.07¼
New White No. 2	.05¾
Light Silesias	.05¾
Black Silesias, soft	.03¾
New Unbleached	.07½
Washable Prints	.04¾
Washable No. 1	.03
Blue Overall	.05½
Cottons—According to grades—	
Washable shredding	.01¾
Fancy Percales	.04¾
New Black Soft	.03¼
Khaki Cuttings—	
Unbleachable Cotton Cuttings	.03½
Bleachable Cotton Cuttings	.04½
Men's Corduroy	.03½
Ladies' Corduroy	.03
Cottonades	.03¼

Domestic Rags (Old)

White No. 1 — Repacked	3.80	"	—
Miscellaneous No. 1	3.20	"	—
Miscellaneous No. 2	2.65	"	—
White No. 2 — Repacked	2.90	"	—
Thirds and Blues—			
Miscellaneous	1.80	"	—
Repacked	2.20	"	—
Black Stockings— (Export)	Nominal		
Roofing Stock—			
Foreign No. 1	Nominal		
Domestic No. 1	1.55	"	—
Domestic No. 2	1.45	"	—
Roofing Bagging	1.35	"	—
Old Manila Rope	5.75	"	—

Bagging

(F. o. b. Phila.)

Gunny No. 1—			
Foreign	Nominal		
Domestic	3.00	"	3.50
No. 1 Clean bright—			
Sisal Strings			.04
No. 2 Clean bright—			
Sisal Strings			.03
Sisal Jute	.02½	"	.02¾
Scrap—			
No. 1	3.25	"	3.50
No. 2	1.75	"	1.80
Wool Tares 1st	4.00	"	4.25
No. 1 New Light Burlap	3.00	"	4.00
New Burlap Cuttings	3.75	"	4.00

Old Papers

(F. o. b. Phila)

OPA Maximum Prices

No. 1 Hard White Envelope Cuts, one cut	3.37½	"	—
No. 1 Hard White Shavings, unruled	2.87½	"	—
Soft White Shavings, one cut	2.50	"	—
White Blank News	1.65	"	—
Soft White Shavings, Misc.	2.15	"	—
No. 1 Fly Leaf Shavings	1.67½	"	—
No. 2 Fly Leaf Shavings	1.12½	"	—
No. 1 Groundwood Fly Leaf Shavings	1.25	"	—
No. 2 Groundwood Fly Leaf Shavings	.90	"	—
Mixed Colored Shavings	.75	"	—
New Manila Envelope Cuts, one cut	2.87½	"	—
Hard White Envelope Cuts, one cut	3.37½	"	—
Triple Sorted No. 1 Brown Soft Kraft	2.50	"	—
Mixed Kraft Env. & Bag Cuttings	2.75	"	—
Kraft Envelope Cuttings	3.25	"	—
No. 1 Heavy Books & Magazines	1.67½	"	—
New Manila Envelope Cuts, one cut	2.87½	"	—
New Manila Envelope Cuttings	2.65	"	—
White Blank News	1.65	"	—
No. 1 Assorted Old Kraft	1.75	"	—
No. 1 Mixed Paper	.70	"	—
Overissue News	.85	"	—
Box Board Cuttings	.72½	"	—
New Corrugated Cuttings, Kraft	2.25	"	—
Old 100% Kraft Corrugated Containers	1.75	"	—
Old Corrugated Containers	1.15	"	—
Jute Corrugated Cuttings	1.07½	"	—

Bagging

(F. o. b. Boston)

Gunny Bagging—			
Foreign	(nominal)		
Domestic	3.25	@	—
Sisal Rope No. 1	*4.75	"	—
Sisal Rope No. 2	*4.25	"	—
Mixed Rope	2.00	"	—
Transmission Rope—			
Foreign	(nominal)		
Domestic	2.75	"	3.00
Manila Rope—			
Foreign	(nominal)		
Domestic	5.75	"	—
Soft Jute Rope	5.25	"	—
Jute Carpet Threads	3.00	"	3.50
Bleachery Burlap	8.50	"	9.00
Scrap Burlap—			
Foreign	(nominal)		
Domestic	3.50	"	—
Wool Tares—			
Foreign	(nominal)		

BOSTON

Old Papers

(F. o. b. Boston)

OPA Maximum Prices

No. 1 Hard White Shavings, unruled	2.87½	@	—
No. 1 Hard White Shavings, ruled	2.50	"	—
Soft White Shavings, Misc.	2.15	"	—
No. 1 Fly Leaf Shavings	1.67½	"	—
No. 2 Fly Leaf Shavings	1.12½	"	—
No. 1 Groundwood Fly Leaf Shavings	1.25	"	—
No. 2 Groundwood Fly Leaf Shavings	.90	"	—
Mixed Colored Shavings	.75	"	—
New Manila Envelope Cuts, one cut	2.87½	"	—
Hard White Envelope Cuts, one cut	3.37½	"	—
Triple Sorted No. 1 Brown Soft Kraft	2.50	"	—
Mixed Kraft Env. & Bag Cuttings	2.75	"	—
Kraft Envelope Cuttings	3.25	"	—
No. 1 Heavy Books & Magazines	1.67½	"	—
New Manila Envelope Cuts, one cut	2.87½	"	—
New Manila Envelope Cuttings	2.65	"	—
White Blank News	1.65	"	—
No. 1 Assorted Old Kraft	1.75	"	—
No. 1 Mixed Paper	.70	"	—
Overissue News	.85	"	—
Box Board Cuttings	.72½	"	—
New Corrugated Cuttings, Kraft	2.25	"	—
Old 100% Kraft Corrugated Containers	1.75	"	—
Old Corrugated Containers	1.15	"	—
Jute Corrugated Cuttings	1.07½	"	—

Bagging

(F. o. b. Boston)

Gunny Bagging—			
Foreign	(nominal)		
Domestic	3.25	@	—
Sisal Rope No. 1	*4.75	"	—
Sisal Rope No. 2	*4.25	"	—
Mixed Rope	2.00	"	—
Transmission Rope—			
Foreign	(nominal)		
Domestic	2.75	"	3.00
Manila Rope—			
Foreign	(nominal)		
Domestic	5.75	"	—
Soft Jute Rope	5.25	"	—
Jute Carpet Threads	3.00	"	3.50
Bleachery Burlap	8.50	"	9.00
Scrap Burlap—			
Foreign	(nominal)		
Domestic	3.50	"	—
Wool Tares—			
Foreign	(nominal)		
Domestic	4.25	"	—
Aust. Wool Pouches	3.75	"	4.00
New Burlap Cuttings	4.75	"	5.00
Heavy Baling Bagging	4.00	"	4.25
Paper Mill Bagging	2.50	"	3.00
No. 2 Roofing Bagging	1.35	"	—

* OPA Maximum Price.

Domestic Rags (New)

(F. o. b. Boston)

Shirt Cuttings—			
New Light Prints	.04½	@	.04¾
Fancy Percales	.04¼	"	.05
New White No 1	.06¾	"	.07
New Light Flannelettes	.05½	"	.06
Canton Flannels, Bleached	.06	"	.06½
Underwear Cutters, Bleached	.06¼	"	.06½
Underwear Cutters, Unbleached	.05¼	"	.06
Silesias No. 1	.06	"	.06½
New Black Silesias	.03	"	.03½
Red Cotton Cuttings	.03½	"	.04
Soft Unbleached	.06½	"	.06¾
Blue Cheviots	.05½	"	.06
Fancy	.02¼	"	—
Washable	.02¾	"	—
Khaki Cuttings	.02¼	"	.03
O. D. Khaki	.03½	"	.03¾
Corduroy	.03¼	"	.03½
New Canvas	.06¼	"	.06¾
B. V. D. Cuttings	.06¼	"	.06¾

Domestic Rags (Old)

(F. o. b. Boston)

White No. 1—			
Repacked	3.80	@	—*
Miscellaneous	3.20	"	—*
White No. 2—			
Miscellaneous	2.65	"	—*
Twos and Blues, Repacked	2.20	"	—*
Old Blue Overalls	2.25	"	2.30
Thirds and Blues, Repacked	2.20	"	—*
Miscellaneous	1.80	"	—*
Black Stockings	3.50	"	4.00
Roofing Stock—			
No. 1	1.55	"	—*
No. 2	1.45	"	—*
No. 3	1.35	"	—*
No. 4	1.35	"	—*
No. 5, Quality A	1.35	"	—*
Quality B	1.20	"	—*
Quality C	.95	"	—*
Old Manila Rope	5.75	"	—

* OPA Maximum Prices.

Foreign Rags

(F. o. b Boston)

Canvas	(nominal)
Dark Cottons	(nominal)
Dutch Blues	(nominal)
New Checks and Blues	(nominal)
Old Fustians	(nominal)
Old Linsey Garments	(nominal)
New Silesias	(nominal)

CHICAGO

Waste Paper

(F. o. b. Chicago)

OPA Maximum Prices.

Shavings—			
No. 1 Hard White Envelope Cuts, one cut	3.37½	"	—
No. 1 Hard White Shavings, unruled	2.87½	"	—
No. 1 Soft White Shavings	2.50	"	—
No. 1 White Ledger	2.17½	"	—
No. 1 Heavy Books & Magazines	1.67½	"	—
White Blank News	1.65	"	—
Mixed Kraft Env. & Bag Cuttings	2.75	"	—
No. 1 Assorted Old Kraft	1.75	"	—
Overissue News	.85	"	—
No. 1 News	.75	"	—
No. 1 Mixed Paper	.70	"	—
No. 1 Roofing Rags	1.55	"	—
No. 1 Roofing Bags	1.45	"	—
Misc.	2.15	"	—
No. 1 White Ledger	2.17½	"	—
No. 2 Ledger, colored	1.87½	"	—
No. 1 Heavy Books & Magazines	1.67½	"	—
Overissue Magazines	1.67½	"	—
New Manila Envelope Cuttings	2.65	"	—
No. 1 Assorted Old Kraft	1.75	"	—
No. 1 Mixed Paper	.70	"	—
Box Board Cuttings	.72½	"	—
Kraft Corrugated Cuttings	2.25	"	—
Old Corrugated Containers	1.15	"	—
Overissue News	.85	"	—
No. 1 News	1.00	"	—